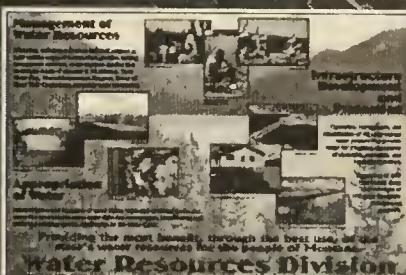


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Department of Natural Resources and Conservation

Annual Report for Fiscal Year 1999



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To help ensure Montana's land and water resources provide benefits for present and future generations.

GUIDING PRINCIPLES

1. We obey the law.
2. We tell the truth.
3. We follow through on commitments and are accountable for our actions.
4. We believe in being fiscally responsible for the taxpayer's money.
5. We invite the public to participate in our actions and decisions.
6. We provide prompt and courteous service to all our customers.
7. We value and trust one another and strive for a healthy and productive work environment.

Montana Department of Natural Resources
and Conservation

ANNUAL REPORT FOR FISCAL YEAR 1999

JULY 1, 1998, TO JUNE 30, 1999

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DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION



MARC RACICOT, GOVERNOR

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STATE OF MONTANA

DIRECTOR'S OFFICE (406) 444-2074
TELEFAX NUMBER (406) 444-2684

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HELENA, MONTANA 59620-1601

Dear Reader:

Welcome to another annual report of the Department of Natural Resources and Conservation (DNRC). Our mission is "to help ensure Montana's land and water resources provide benefits for present and future generations." This annual report covers DNRC's programs and the accomplishments that occurred during Fiscal Year 1999 (which ended on June 30, 1999). It has been another very productive year for the department and we have made great progress in many different areas.

Some of the highlights from this year's report include:

- Providing administrative, legal and financial assistance to Montana's 58 conservation districts to help them identify and address local natural resource concerns, through the Conservation and Resource Development Division
- Processing over 15,000 payments and coordinating two general obligation bond sales totaling \$4.1 million through the Centralized Services Division
- Protecting over 50 million acres of state and private lands from wildfire, and keeping 94 percent of all wildfires that occurred under 10 acres in size, through the Forestry Division
- Issuing 551 permits to drill and plugging and restoring orphaned and abandoned wells, through the Board of Oil and Gas Conservation
- Concluding compacts and settling reserved water rights for the Red Rock Lakes National Wildlife Refuge and the Crow Tribe, through the Reserved Water Rights Compact Commission
- Distributing over \$44 million in earnings and interest directly to the public schools and other entities (which in the public school system equated to \$260 per student), through the Trust Land Management Division
- Completion of the rehabilitation, repair, and enlargement of the Tongue River Dam, through the Water Resources Division

I hope you will find this report both informative and useful. Please let me know how you feel we are doing and what we can do to serve you better.

Sincerely,

A handwritten signature in black ink, appearing to read "Bud Clinch".

Arthur R. Clinch
Director

INTRODUCTION



INTRODUCTION

“Helping to ensure Montana’s land and water resources provide benefits for present and future generations” is the mission of the Montana Department of Natural Resources and Conservation (DNRC).

First established in 1971 as a result of the Executive Reorganization Act of 1971, the department provides leadership in managing the state’s natural resources. In 1995 the department was reorganized as part of the reorganization of Montana’s natural resource and environmental agencies. It is presently responsible for promoting the stewardship of Montana’s water, soil, forest, and rangeland resources and for regulating forest practices and oil and gas exploration and production.

Department Organization

The director of the Department of Natural Resources and Conservation is Arthur R. “Bud” Clinch.

As shown in Figure 1, eight boards and commissions are attached to the department. Four of them — the State Board of Land Commissioners, Reserved Water Rights Compact Commission, Board of Oil and Gas Conservation, and Board of Water Well Contractors — have decision-making authority. The other four — the Resource Conservation Advisory Council, Rangeland Resources Committee, Grass Conservation Advisory Committee, and Drought Advisory Committee — act in an advisory capacity only.

The department is organized into seven divisions:

- Centralized Services Division
- Conservation and Resource Development Division
- Forestry Division
- Oil and Gas Conservation Division
- Reserved Water Rights Compact Commission
- Trust Land Management Division
- Water Resources Division

Two of the divisions — the Oil and Gas Conservation Division and the Reserved Water Rights Compact Commission — are attached to the department for administrative purposes only.

Figure 1



Division Duties and Responsibilities



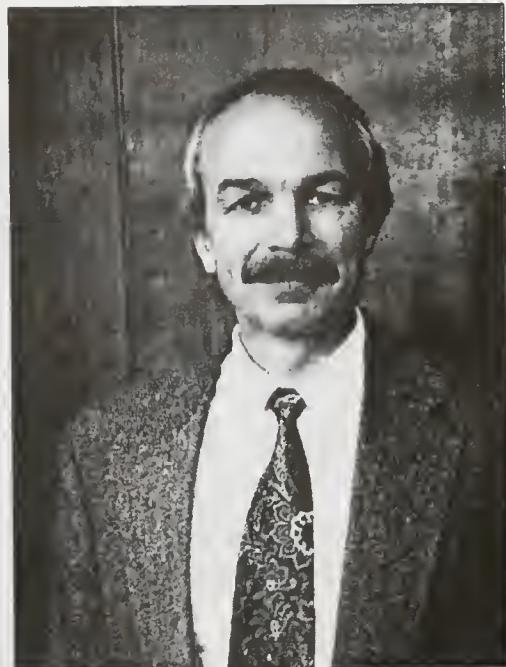
Ann Bauchman, Division Administrator

Centralized Services

The Centralized Services Division provides administrative and operational support to all divisions. Support services include financial management, purchasing, data processing, personnel, legal, reception, and mail. The division coordinates information services and prepares publications and graphic materials for printing. Trust revenues are collected and distributed, and ownership records for trust and nontrust lands are maintained.

Conservation and Resource Development

The Conservation and Resource Development Division coordinates, supervises, and provides financial and technical assistance to Montana's 58 conservation districts, and it provides technical, financial, and administrative assistance to public and private entities to complete projects that put renewable resources to work, increase the efficiency with which natural resources are used, or solve recognized environmental problems. The division receives advice and guidance from three attached bodies: the Resource Conservation Advisory Council, the Rangeland Resources Committee, and the Grass Conservation Advisory Committee.



Ray Beck, Division Administrator

Forestry

The Forestry Division protects the state's forested and nonforested watershed lands from wildfire; provides aviation services; operates a nursery and provides shelterbelt, windbreak, wildlife habitat improvement, reclamation, and reforestation plantings on state and private lands; and regulates forest practices and wildfire hazards created by logging or other forest management operations on private lands.



Don Artley, Division Administrator

Oil and Gas Conservation



Tom Richmond, Division Administrator

The Board of Oil and Gas Conservation and its technical support staff are attached to the department for administrative purposes. The quasi-judicial board is comprised of seven members consisting of industry representatives, landowners, and an attorney. They administer Montana's oil and gas laws and the federal Underground Injection Control Program to promote conservation and prevent waste in the recovery of these resources through regulation of oil and gas exploration and production. The board and its staff issue drilling permits; classify wells; establish well spacing units and land pooling orders; inspect drilling, production, and seismic operations; investigate complaints; conduct engineering studies; and collect and maintain complete well data and production information.

Reserved Water Rights Compact Commission



Susan Cottingham, Program Manager

The Reserved Water Rights Compact Commission, which is also administratively attached to the department, was created by the legislature in 1979 as part of the water rights adjudication effort. Commissioners are appointed by the governor, the attorney general, the speaker of the House of Representatives, and the president of the Senate. The nine-member commission and its support staff negotiate water rights with Indian Tribes and federal agencies to establish a formal agreement on the amount of water to be allocated to each interest.

Trust Land Management

The Trust Land Management Division is responsible for managing the surface and mineral resources of forested, grazing, agricultural, and other classified state trust lands to produce revenue for the benefit of Montana's public schools and other endowed institutions. The State Board of Land Commissioners oversees the administration of the state trust land in Montana, as directed by the Montana Constitution. This board consists of Montana's top elected officials: the governor, superintendent of public instruction, secretary of state, attorney general, and state auditor.



Jeff Hagener, Division Administrator

Water Resources

The Water Resources Division is responsible for many programs associated with the uses, development, and protection of Montana's water. The division also develops and recommends water policy to the director, governor, and legislature. The division consists of an administration unit and four bureaus: water management, water rights, state water projects, and water operations. Attached to the Water Operations Bureau is the 6-member Board of Water Well Contractors, a quasi-judicial board that can issue, suspend, or revoke licenses; promulgate rules and regulations; investigate complaints; and hold disciplinary hearings. The 18-member Drought Advisory Committee is also attached to the Water Resources Division.

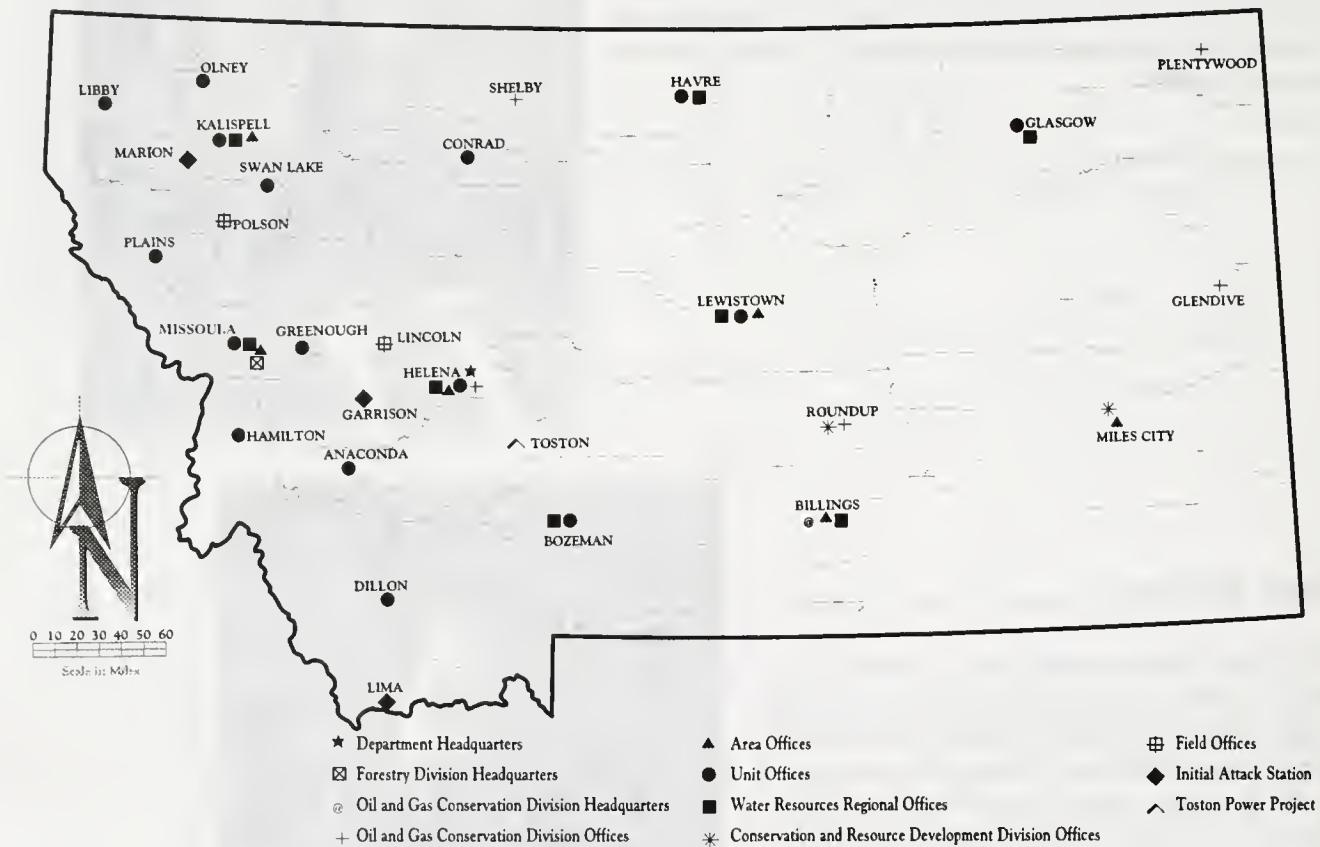


Jack Stults, Division Administrator

Field Offices

Although the department headquarters is located in Helena, the field operations for the department's programs are performed through field offices and personnel located in 28 different communities (see Figure 2). Included are both full time and seasonal employees from the Conservation and Resource Development, Forestry, Oil and Gas Conservation, Trust Land Management, and Water Resources Divisions.

Figure 2
Location of Department of Natural Resources and Conservation Offices



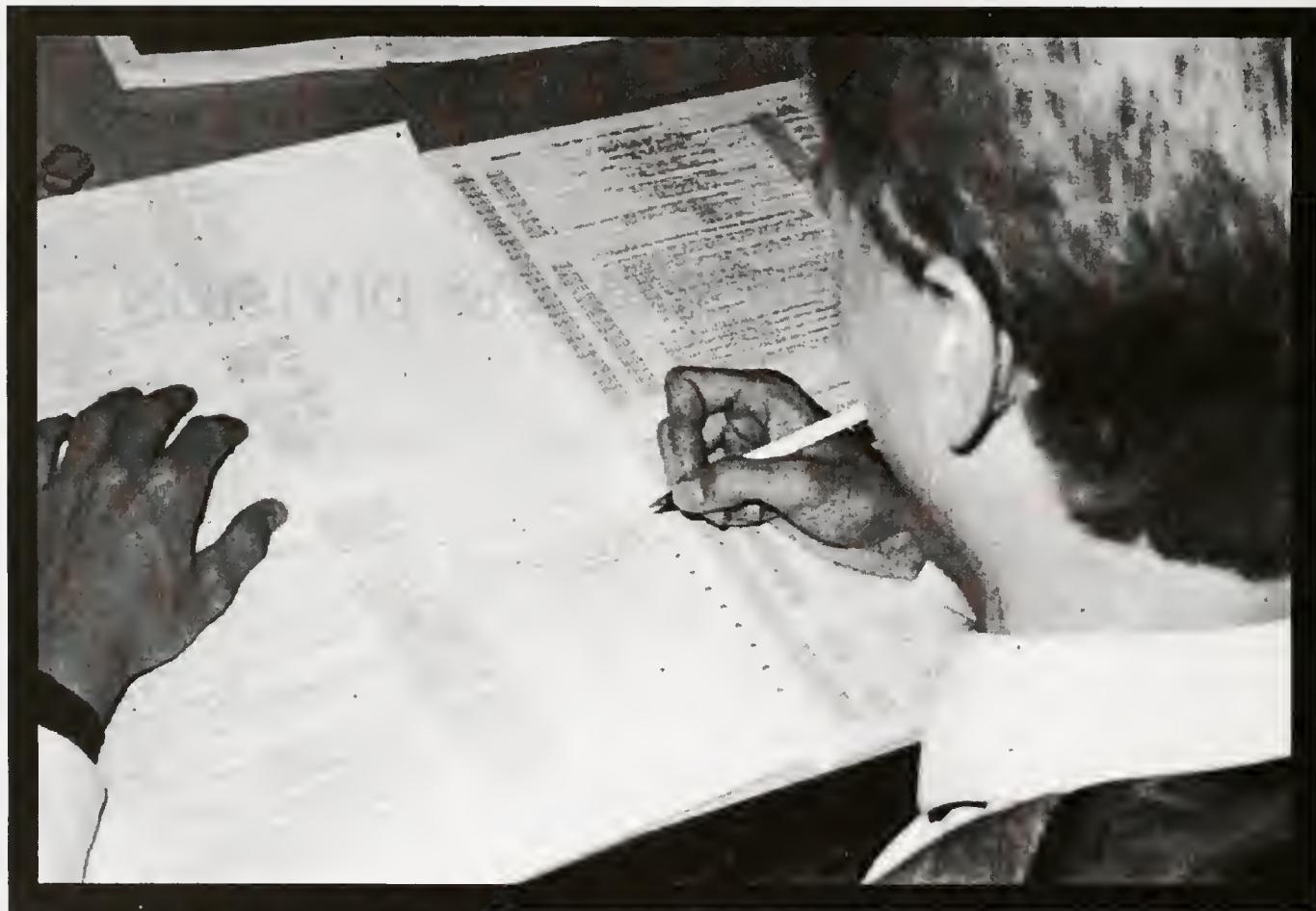
Financial Information

Table 1 presents overall expenditures and funding of the Department of Natural Resources and Conservation for Fiscal Year (FY) 1999. Information on two of the department's funding sources, the Resource Indemnity Tax and the Coal Severance Tax, can be found in Appendix A.

Table 1
Department of Natural Resources and Conservation
Expenditures and Funding
in Fiscal Year 1999

	Budgeted	Nonbudgeted	Total
EXPENDITURES			
Personal Services	\$20,075,759		\$20,075,759
Operating Expenses	29,502,040	\$150,389	29,652,429
Equipment	416,677		416,677
Capital Outlay	23,672		23,672
Local Assistance	125,000		125,000
Grants	5,800,221		5,800,221
Transfers	343,419	29,142,006	29,485,425
Debt Service	175,647	8,819,511	8,995,158
TOTAL	\$56,462,435	\$38,111,906	\$94,574,341
FUNDING			
General Fund	\$22,299,827		\$22,299,827
State Special Revenue Fund	19,278,902	\$22,655,717	41,934,619
Federal Special Revenue Fund	14,125,787		14,125,787
Debt Service Fund		15,456,189	15,456,189
Capital Projects Fund	65,829		65,829
Proprietary Fund	692,090		692,090
TOTAL	\$56,462,435	\$38,111,906	\$94,574,341

CENTRALIZED SERVICES DIVISION



CENTRALIZED SERVICES DIVISION

Provides managerial, administrative support, information, computer, legal, and personnel services to all divisions of the department.

The Centralized Services Division (CSD) provides managerial and legal services to the department through the Director's Office. The division also manages all financial activities, contracting, and procurement; oversees personnel policies and functions; coordinates computer systems; performs public information and media relations tasks; produces publications and graphic materials; and provides general administrative support services. Support services include payroll, data entry, reception, and mail. Fiscal responsibilities include trust revenue collection and distribution, as well as bond and loan accounting.

In Fiscal Year (FY) 1999, the division began the migration to PeopleSoft software as part of the Montana Project to Reengineer the Revenue and Information Management Environment (MtPrime). Two of the PeopleSoft modules, Asset Management and Human Resources, were activated, with the financial module scheduled for activation in FY 2000. CSD is coordinating the MtPrime training and transition for the entire department.

Training for Personnel Bureau staff occurred throughout the year and culminated in the first "live" production of the payroll using PeopleSoft in April 1999. The payroll process using the new software is somewhat more time-consuming, involving both a steep learning curve and additional data entry. The bureau provided direction for the classification of 60 positions and the recruitment for and filling of 40 permanent positions and numerous seasonal positions. It successfully negotiated a union contract for the machinist employees. The bureau continues to provide service to the department in developing and interpreting policies, explaining benefits to employees, providing training and new employee orientation, and assisting managers in personnel actions.

The Procurement and Contracting Bureau acted on over 400 requisitions for the procurement of goods and services. The bureau also participated with a variety of field personnel in establishing legal, cost-efficient, and quick methods to procure urgently needed commodities and services. Over 200 contracts, grants, and amendments (with a total value of over \$38.2 million) were reviewed for legal and fiscal compliance, and contractual requirements (such as liability insurance and workers compensation coverage) were monitored. Bureau staff responded to various departmental matters such as risk management and tort claims, the Leased Vehicle Program, and ProCard, which is a credit card to be used by all state employees. The bureau is currently updating the department's purchasing and contracting manual to comply with recent legislative and legal mandates; this manual will be posted on the DNRC Website.

The Information Technology Bureau began two large projects in 1999. Attaching DNRC field offices to the state's computer network began with the Plains office in May. One office will be networked each month through June 2001. This project will bring better communications and data access to our field offices. The second large project is the redesign of the trust lands computer system. Work has begun to migrate the aging mainframe system to a more efficient and user-friendly network and PC-based system. Completion of this project is expected by June 2001.

The Information Services Section provided editing, illustration, design, and layout for many department publications ranging from general interest brochures to highly technical research reports. More than 10,000 color copies were produced in-house, and the section created numerous color, computerized maps illustrating natural resource conditions and management alternatives. A Public Information Task Force (consisting of representatives from all divisions, a land office, and a water office) has been formed and is working with section staff to develop a DNRC Public Information Policy and a department-level public information plan. Our liaison to the U. S. Board on Geographic Names handled petitions, letters, and phone calls from well over 1,200 Montanans in connection with two bills before the 1999 Montana Legislature; these bills addressed changing the name of Pompey's Pillar and of numerous places in Montana that include the word "Sacajawea," "Marias," or "squaw."

Over 15,000 payments were processed during 1999 by the Fiscal Bureau, which also coordinated two general obligation bond sales totaling \$4.1 million. Procedure manuals were written for each function within the bureau, and two legislative financial audits were finalized. It was the first year of a formal audit of the State Revolving Fund loan programs for public drinking water and wastewater systems in local communities. More than 30,000 checks were received, deposited, and distributed within trust, federal, and state special revenue accounts.

CONSERVATION AND RESOURCE DEVELOPMENT DIVISION



CONSERVATION AND RESOURCE DEVELOPMENT DIVISION

Provide technical and financial assistance to local governments, state agencies, and private citizens for the conservation, development, protection, and management of the state's natural resources.

The Conservation and Resource Development Division (CARDD) helps manage natural resources and finances conservation, resource management, and reclamation activities. The division has 19.5 full-time employees who administer the work of the Conservation Districts Bureau and the Resource Development Bureau.

Conservation Districts Bureau

Under state law, the Conservation Districts Bureau (CDB) is responsible for assisting Montana's conservation districts and state grazing districts. A conservation district (CD) is a legal subdivision of state government that (1) develops and carries out long-range programs that will conserve and improve soil and water resources within its boundaries, and (2) encourages maximum participation by the general public and all local public and private agencies to fulfill this purpose.

State law also directs the department to supervise and coordinate the formation and operation of grazing districts. Grazing districts are cooperative, nonprofit groups that set up permitting systems to aid in the management of grazing lands where land ownership is intermingled in order to conserve, protect, restore, and properly utilize grass, forage, and range resources. The 1999 legislature created the Montana Grass Conservation Commission to assume the department's grazing district responsibilities effective July 1, 1999.

CDB works with the people of Montana on these 10 areas of conservation and resource management.

- Conservation district supervision and assistance
- Rangeland management coordination
- Grazing district supervision and assistance
- Stream protection
- Watershed efforts and projects
- Natural resource conservation education activities
- Riparian management
- Grant and loan programs
- Resource conservation and development (RC&D) areas
- Salinity control

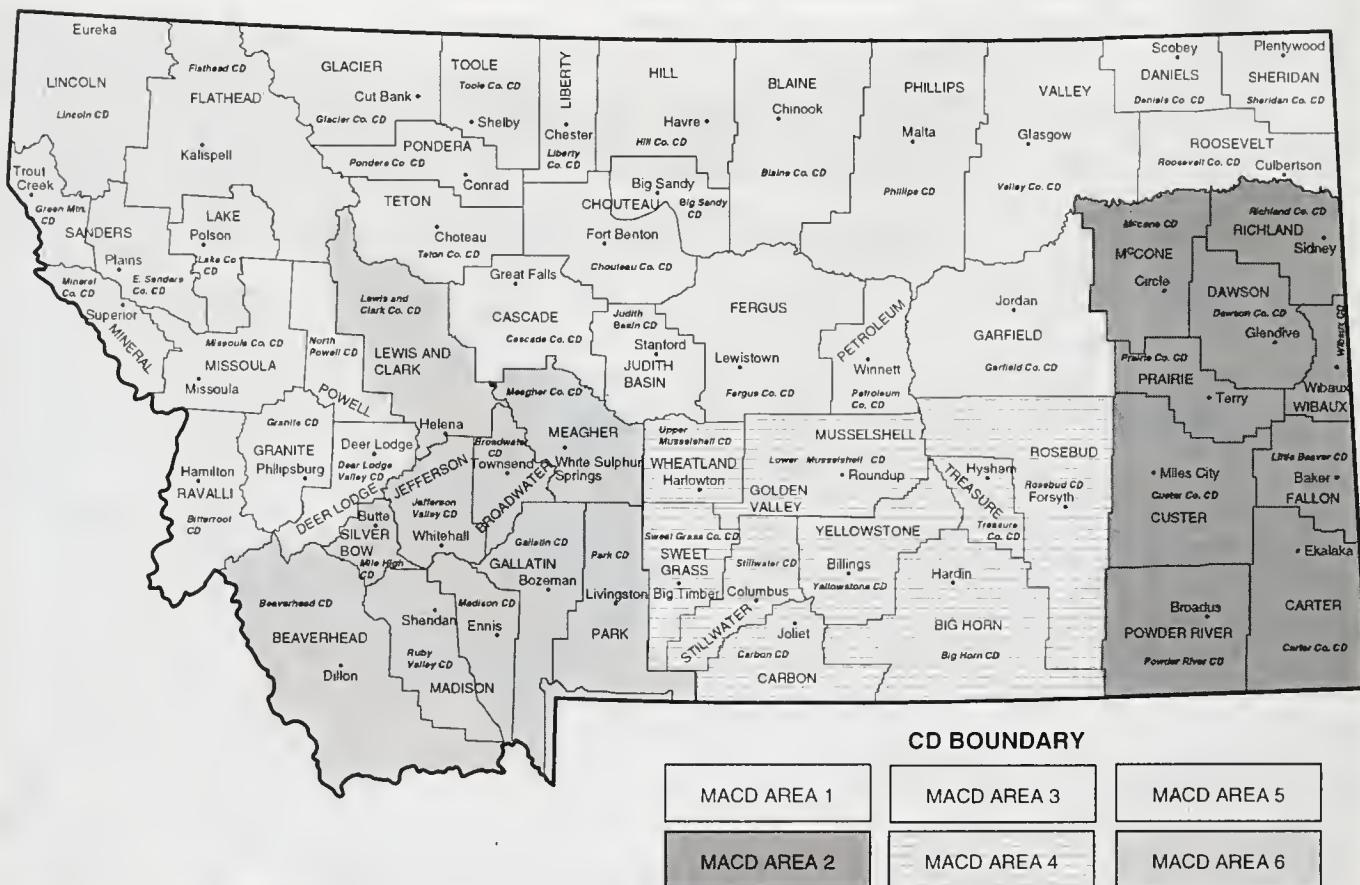
Conservation District Supervision and Assistance

The bureau provides administrative, legal, and financial assistance to Montana's 58 conservation districts (see Figure 3) to help them identify and address local natural resource concerns. Because natural resource challenges are becoming more complex, conservation districts are requiring more complex technical assistance. The 1997 legislature authorized several programs to provide districts with services and programs needed to carry out their statutory responsibilities effectively. Legal

services are provided to conservation districts either through a legal services contract with CDB or by a direct grant. To date, legal services have been used for water reservation issues, contract reviews, 310 advice, and assistance to four conservation districts that are developing a large rural water project in eastern Montana.

A district officials' directory was completed, printed, and distributed, and a CD employee handbook is in the beginning stages of development.

Figure 3. Montana's Conservation Districts



The Conservation Districts Bureau conducted or participated in two conservation district employee workshops and two new supervisor orientations. The workshops cover conservation district legal responsibilities in many aspects of conservation district law. CDB also developed a new supervisor orientation video.

The Resource Conservation Advisory Council (RCAC), which consists of seven members serving at the pleasure of the governor, provides advice and assistance on conservation matters. Current RCAC members are:

Dennis DeVries	Polson	Representing Conservation Districts
Jamie Doggett	White Sulphur Springs	Representing Western Montana
Sever Enkerud	Glasgow	Representing Grazing Districts
Robert Fossum	Richland	Representing Eastern Montana
Ellis Hagen	Westby	Representing the General Public
Marieanne Hanser	Billings	Representing South Central Montana
Tom Stelling	Fort Shaw	Representing North Central Montana

The Conservation Districts Bureau also works with the Montana Association of Conservation Districts (MACD) and the National Association of Conservation Districts (NACD) to address natural resource concerns.

Watershed Efforts and Projects

Through the capacity-building program, conservation districts have identified the need for watershed planning as a high priority goal. Conservation districts, as the local entity responsible for addressing nonpoint source (NPS) water pollution, play a key role in developing local watershed plans. CDB participates on the Watershed Coordinating Council, a group of state and federal agencies and private organizations that coordinates programs in Montana that address aspects of watershed management. CDB also provides technical and financial assistance to conservation districts in support of watershed efforts.

Rangeland Management Coordination

The rangeland resource program has four major areas of emphasis. They include:

- Working with county range committees, conservation districts, and producer groups to foster sound rangeland management
- Encouraging coordination and cooperation between private, state, and federal entities involved in range management
- Administering the rangeland improvement loan program
- Co-sponsoring the Governor's Range Tour, Winter Grazing Seminar, and Youth Range Camp

The program receives guidance from the Rangeland Resource Executive Committee, which consists of six persons involved in ranching who are appointed by the governor. Current members are:

Les Gilman, Chairman Alder	Mark Davies Chinook	Quinn Haughian Terry
Steve Hedstrom Raynesford	John Hollenback Gold Creek	Michael Lane Three Forks

Robert E. Lee of Judith Gap resigned from the committee in FY 1999 to serve on an agricultural committee.

CD staff work to strengthen local grazing management programs by helping sponsor workshops, tours, and demonstration projects. Fourteen workshops were conducted through our Riparian Workshops Grant Program using U.S. Environmental Protection Agency (EPA) Wetland funds. These conservation-district-sponsored workshops included eight Monitoring for Success Workshops, the Governor's Range Tour, the Montana Youth Range Camp, three winter grazing seminars, and a riparian tree-planting project.

A loan program was started in 1979 for the purpose of improving rangelands in Montana. To date, 190 applications have been received for loans totaling \$3,461,004. Currently, 41 loans totaling \$514,417 are in repayment status. A typical rangeland loan project involves drilling a well and installing underground water lines to supply stock tanks. These stock tanks are usually located in areas where

water is insufficient or unsuitable for livestock. The projects are sometimes combined with cross fencing and an overall grazing plan to improve the rangeland. Over 700,000 acres of Montana rangeland have been improved using funds from this program.

Grazing District Supervision and Assistance

State law provides for the creation of cooperative, nonprofit grazing districts and sets up a permitting system that aids in the management of grazing lands where ownership is intermingled. In its administration of the Montana Grass Conservation Act (grazing district law), the bureau advises, supervises, and coordinates the formation and operation of these grazing districts. Uniform plans that conform with recognized conservation practices are developed for the use of lands within the boundaries of the districts. The 27 state grazing districts represent 1,353 permittees and cover 10,501,070 acres of land.

The Montana Grass Conservation Advisory Committee consisted of these seven employees and board members of local grazing districts.

Jim Raths, Chair	Lavina
Sandra Brown*	Terry
Vicki Dunaway	Billings
Lee Iverson	Winnett
Dewayne Ozark*	Glasgow
Gary Unruh*	Chinook
Bud Clinch	Director, DNRC

After a series of meetings regarding district issues, the committee completed its findings and recommendations in October 1998. As a result of the committee's work, the 1999 legislature adopted House Bill 444 generally revising state grazing district law and creating the Montana Grass Conservation Commission.

On July 1, 1999, the commission will replace the advisory committee (although three of the members, whose names are marked with asterisks, will carry over) and assume all grazing district responsibilities previously held by the department. The commission, which recently held its organizational meeting, will be composed of these five board members of local grazing districts.

Bill Loehding, Chair	Billings
Gary Unruh, Vice-Chair*	Chinook
Sandra Brown*	Terry
Phil Hall	Mosby
Dewayne Ozark*	Glasgow

Stream Protection

CDB provides administrative assistance, training, and legal opinions to conservation districts to help them administer the Natural Streambed and Land Preservation Act, commonly referred to as the "310 law." Under this law, any private entity proposing a project that will alter or modify the bed or banks of a stream must obtain a permit.

In FY 1999, CDB updated a booklet summarizing more than 90 legal opinions pertaining to the 310 law. With funds allocated by the 1997 legislature, two engineering firms were hired under contract to provide conservation districts with technical review on difficult or complex 310 projects. To date, 20 project reviews have been conducted in 16 conservation districts. A field guide describing the application and design criteria of over 70 stream projects has been drafted and is near completion.

CDB is providing technical support for an effort to consolidate the stream and wetland permit application forms used by several local, state, and federal agencies. A shared application form has been tested in eight conservation districts with favorable results and is expected to be in place by January 1, 2000. Funds were provided to Roosevelt County Conservation District for a study that will help determine the best methods of bank stabilization in the Missouri River.

Legal assistance was provided to conservation districts to review 310 procedures to ensure compliance with the federal Endangered Species Act.

Natural Resource Conservation Education Activities

This program provides grant funding and policy guidance for resource conservation education programs. The bureau assists conservation districts in sponsoring adult education, elementary and secondary school activities, and several annual events: the Envirothon, Youth Range Camp, and Natural Resources Youth Camp. Program goals are to promote discussion of resource issues and provide the knowledge and skills necessary to make decisions regarding the management, protection, and wise use of our natural resources.

CDB administered a grant authorized by the 1997 legislature to conduct the 1999 Envirothon. The Youth Range Camp operates on donations and other grants.

Mini-grants of \$500 each are available to educators statewide, enabling teachers to develop environmental education projects around local resource issues. The grant program encourages classroom discussion of resource conservation and environmental issues in secondary and elementary schools, by providing financial support for teacher-initiated classroom projects. Through its nine years, the mini-grant program has funded 173 classroom projects statewide, with \$94,947 in grant funds. A total of 19 mini-grant projects were funded in FY 1999 for \$10,000. Examples of five mini-grant projects follow.

- Bitterroot CD sponsored a grant to match funds from the National Fish and Wildlife Foundation and to purchase supplemental materials for the "Songbird Kit." The funding also helps connect classrooms in Mexico with classrooms in the USA through the study of migratory birds.
- Liberty and Glacier County CDs sponsored mini-grants to host a youth field day for the Hillside, Rimrock, Glendale, and Sage Creek Hutterite Colony schools. Fifty students participated in workshops on water quality sampling, groundwater studies, soils, watershed ecology, salt-tolerant vegetation, and grass plugging.

- Pondera County CD sponsored a grant for a riparian ecology field day for fourth grade students. Students studied riparian wildlife, ecology, soils, and plants, as well as archaeology and water quality.
- Sweet Grass County CD sponsored a grant for Big Timber High School's "Yellowstone River Watch Program." Fourteen permanent monitoring sites have been established along the river from Gardiner to Sidney. Students collect samples twice a year and analyze them in their school lab. The data are used to develop a profile of the river system as the Yellowstone flows through the state.
- Custer County CD sponsored a grant for a youth education fair. Approximately 92 students from kindergarten through eighth grade received instruction in soils, geology, forestry, range, and water quality.

Riparian Management

Proper management of riparian areas is critical to maintaining water quality, stream bank stability, and flood control. Since 1988, the bureau has coordinated a comprehensive riparian management program involving conservation districts, federal and state agencies, and private organizations. The purpose of the program is to promote proper riparian management by emphasizing the economic, ecological, and hydrologic benefits of these areas to landowners.

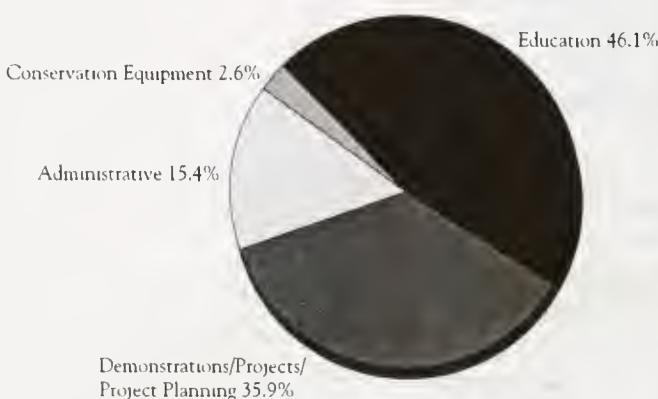
Program efforts for FY 1999 included:

- Providing 14 grants to conservation districts
- Assisting 11 conservation districts with stream assessments
- Updating and reprinting the *Riparian Grazing Successes in Montana* booklet
- Coordinating production and printing of the *Grazing Best Management Practices* booklet

Grants have been received and private funds raised to pay for some of these projects.

Grant Programs

Figure 4. Allocation of Grant Funds for Conservation Districts Projects in Fiscal Year 1999



The bureau administers three grant programs (besides the conservation education mini-grants).

Conservation District Project Grants

The conservation district project grant program provided \$200,000 in FY 1999 from coal severance tax funds for natural-resource-related projects and activities. Funds are used to correct stream bank erosion and sedimentation problems; administer new technology; and conduct water development and management projects, youth and adult educational activities, and equipment rental programs. All projects funded in FY 1999 are listed in Table 2, and the allocation of funds is shown in Figure 4.

Table 2
Conservation District Project Grants Awarded in FY 1999

Conservation District	Project	Amount
Beaverhead	Big Hole Cooperative Weed Project	\$3,402
Bitterroot	Watershed Kit	2,000
Broadwater	Slim Sam Riparian Area	5,500
Carter County #1	Area Meeting	682
Carter County #2	Range Days	3,000
Cascade County	Sun River Stabilization Project	7,050
CDB #1	Supervisor Mileage	6,000
CDB #2	Conservation Education Mini-Grant	5,000
CDB #3	Conservation Education Mini-Grant	5,000
CDB #4	310 Data Collection on Yellowstone	3,600
Daniels County	Conservation Day	500
Fergus County	Brewery Flats – Education Site	5,000
Gallatin	Ortho Photo Quads	21,500
Garfield County #1	Water Quality Monitoring	8,400
Garfield County #2	Governor's Range Tour 1999	4,410
Judith Basin	Youth Range Camp 1999	6,000
Lake County	Computer Purchase	25,760
Lower Musselshell	Careless Creek Newsletter	2,000
McCone	Lower Missouri Coordinated Resource Management (CRM)	10,000
Park	Yellowstone River Task Force	10,000
Petroleum County	Land Ownership Maps	3,740
Richland County	Range Aerator	9,500
Roosevelt County #1	Lower Missouri Erosion Study	10,000
Roosevelt County #2	Irrigation Water Management	3,500
Stillwater	CD Employee Training	5,000
Sweet Grass County #1	Supervisor Workshop	655
Sweet Grass County #2	Winter Grazing Seminar 1999	1,050
Valley County #1	Dry Prairie Water Supply	20,000
Valley County #2	Opheim Water System	10,000
Valley County #3	Multi-County Family Camp	2,000
Wibaux	Water Quality Monitoring	2,600
TOTAL		\$202,849

Administrative Grants

The bureau receives \$150,000 per year from the resource indemnity tax (RIT) trust fund for grants to districts whose county mill levies are inadequate to support district operations. These grant funds are for administrative purposes only and are used mostly for administrator salaries and office-related expenses. In FY 1999, grants were awarded to 40 CDs.

More information on the coal severance tax and the RIT is presented in Appendix A.

Watershed Planning Assistance Grants

This grant program was authorized by the 1997 legislature. The purpose is to assist conservation districts and affiliated local watershed groups with expenses associated with watershed planning. Funds can be used for collection of baseline resource information, facilitators, development of a watershed management plan, training, educational efforts, and incidental costs associated with watershed planning. Twelve grants totaling \$47,000 were authorized in FY 1999. Projects funded are listed in Table 3.

Table 3
Watershed Planning Assistance Grants Awarded in FY 1999

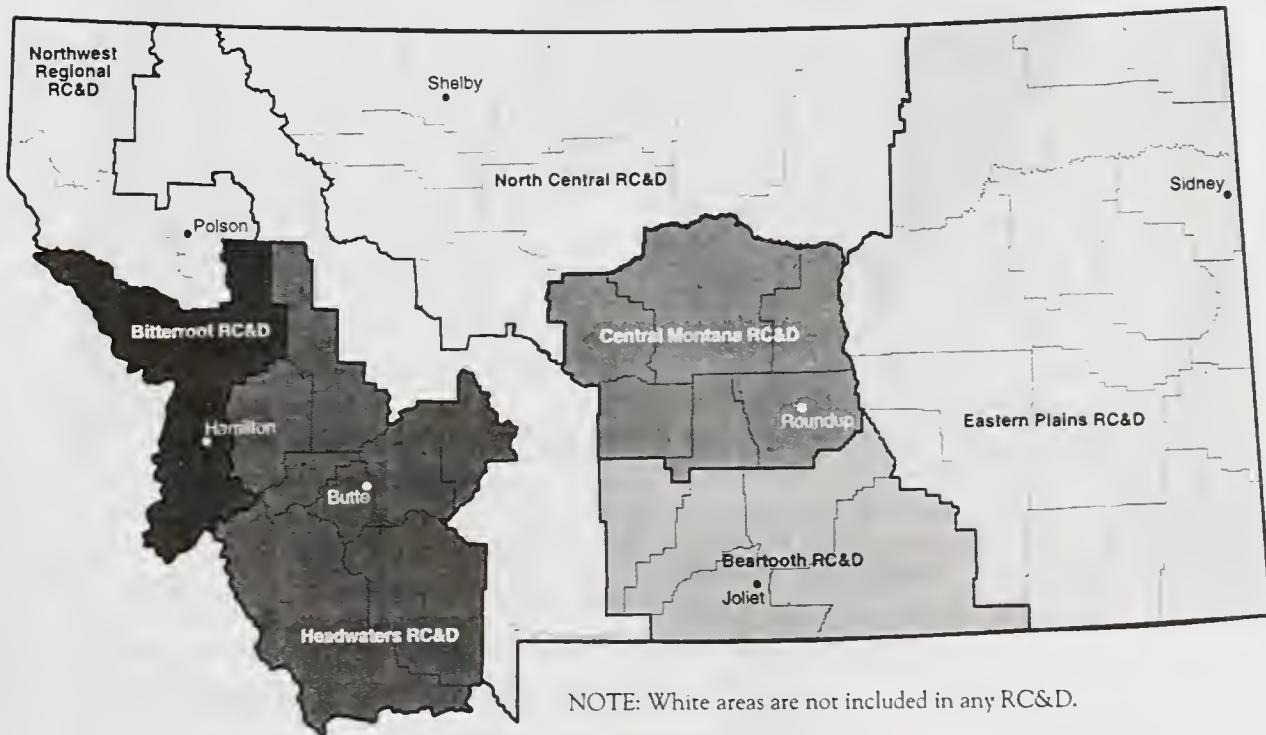
Conservation District	Project	Amount
Beaverhead	Big Hole Watershed Committee Support	\$5,000
Bitterroot	Watershed Coordinator	5,000
Hill County	Milk River Video	5,000
Lower Musselshell #1	Painted Robe Watershed Plan	3,800
Lower Musselshell #2	Painted Robe GIS Helicopter Inventory	2,225
Madison	Baseline Data Collection	5,000
Meagher County	Smith River Resource Assessment/Plan	5,000
Mile High #1	Big Hole Monitoring Plan	3,775
Mile High #2	Noxious Weed Mapping	1,008
Mineral County	Baseline Data Collection	5,000
Pondera County	Resource Assessment	5,000
Teton County	Education Outreach	1,200
TOTAL		\$47,008

Resource Conservation and Development Areas

In a cooperative effort with the U.S. Natural Resources Conservation Service (formerly named the Soil Conservation Service), the bureau has taken a lead role in assisting in activities of the state resource conservation and development (RC&D) coordinator and the Central Montana RC&D Area. The state RC&D coordinator is currently helping develop key issues and providing direct assistance to the RC&Ds in Montana (see Figure 5). The Central Montana RC&D was involved in the following activities.

- Facilitation of a prefeasibility study of a multi-city/multi-county municipal water supply system, including a deep well water source and a transmission system. The partnership includes community partners from Golden Valley and Musselshell Counties, the Montana Bureau of Mines and Geology, and the Montana Watercourse.
- Facilitation of the process of establishing a multi-county, staffed Economic Development District under the rules of the U.S. Department of Commerce's Economic Development Administration.
- Participation in planning and implementation of a strategy to establish a university outreach program, located in Lewistown, with the ability to serve the RC&D area.
- Development of a recruitment strategy for businesses wanting to participate in the Small Business Administration's Hubzone Program. Wheatland and Musselshell Counties are designated "Hubzone Counties." In the future, as this program is institutionalized, it appears that businesses may have to qualify through the Hubzone Program in order to be eligible for federal contracting.
- Certification in the "Campaign for Home Ownership" program offered through the Neighborhood Reinvestment Corporation, Ithica, New York. This project will make home ownership training available to the RC&D area, which is a requirement for eligibility for First Time Homebuyers' Down Payment Assistance funding from federal agencies.

Figure 5
Resource Conservation and Development Areas in Montana



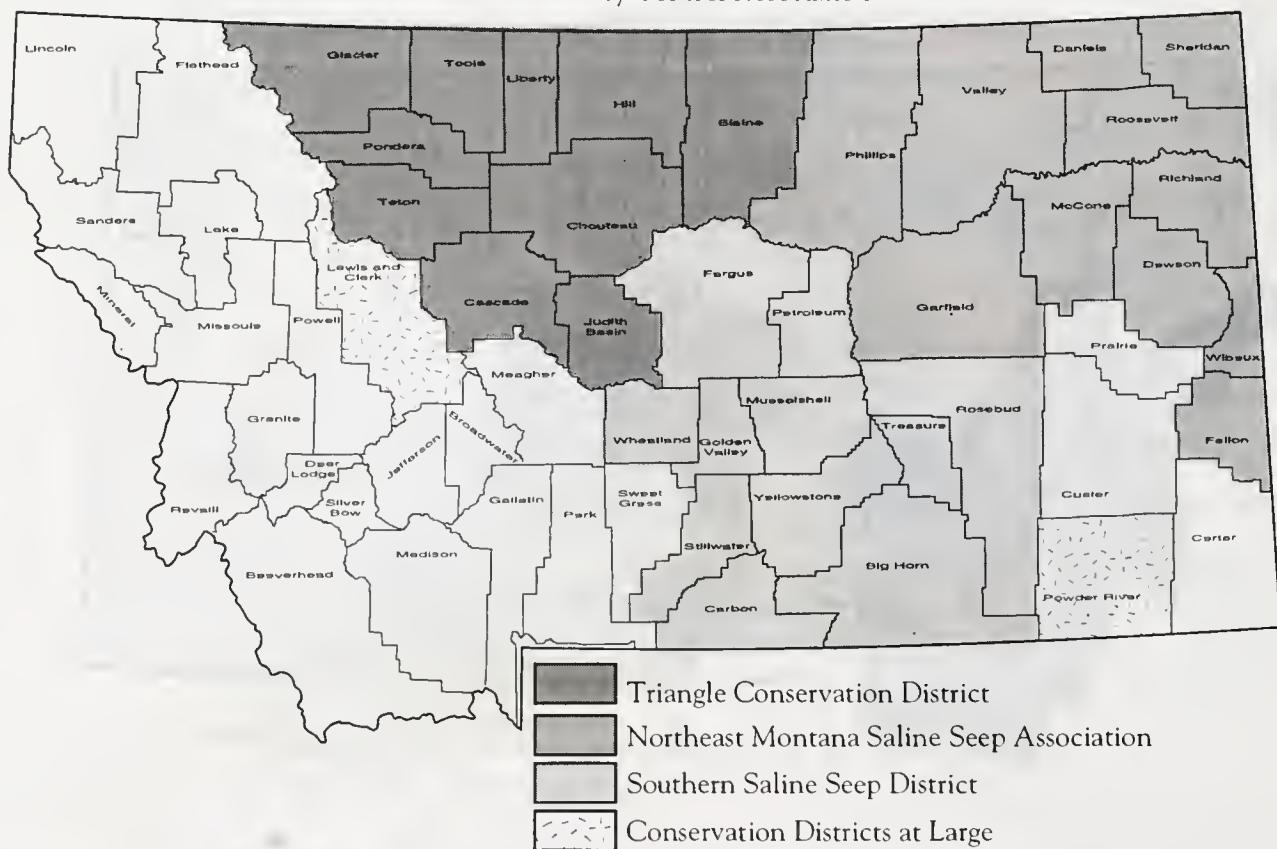
Salinity Control

The Montana Salinity Control Association (MSCA) is a group of conservation districts established to manage and reclaim saline seeps and agriculturally caused water quality problems on an individual farm and/or watershed basis. MSCA originated in 1979 in 9 counties and now serves 34 (see Figure 6). MSCA is partially funded from mineral taxes administered by CARDD. Through the Conservation Districts Bureau, MSCA received \$200,000 in FY 1999. Additional funding comes from landowner and user fees for projects. Outside funds have been coming into the program since 1983.

Conservative estimates indicate that over 300,000 acres in Montana are affected by salinity. MSCA has developed individual reclamation plans for 759 sites on 100,016 acres to address 12,487 salinized acres that have been taken out of crop production. Six salinity-based watershed projects, ranging in size from 70,000 to 625,000 acres, are completed or in progress. Each watershed project has a local advisory group that contributes funds and provides coordination between landowners and technical agencies. CDB is involved in the organization of individual and area watershed projects through local conservation districts.

MSCA coordinates with state and federal agencies to utilize and adapt their technical assistance and funding programs to address nonpoint source pollution and other resource concerns. In addition, MSCA has a strong relationship with Canadian provincial salinity specialists to share information through the Prairie Salinity Network.

Figure 6.
Montana Salinity Control Association



Resource Development Bureau

The Resource Development Bureau (RDB) administers several grant and loan programs and provides assistance to conservation districts for the administration of water reservations. The programs include:

- Reclamation and Development Grants Program
- Renewable Resource Grant and Loan Program
 - Public Grants
 - Planning Grants
 - Emergency Grants
 - Private Grants
 - Private Loans
 - Public Loans
- State Wastewater Revolving Fund Loan Program
- Safe Drinking Water Revolving Fund Loan Program
- Treasure State Endowment Loan Program
- Conservation District Water Reservations

FY 1999 was a successful year for these programs. Over 300 contracts were being actively administered, and approximately \$15 million in grant and loan funds was disbursed for projects throughout the state.

Reclamation and Development Grants Program

The reclamation and development grants program (RDGP) is a state-funded grant program designed to fund projects that “*indemnify the people of the state for the effects of mineral development on public resources and that meet other crucial state needs serving the public interest and the total environment of the citizens of Montana*” (MCA 90-2-1102). The program was established in 1987. Any department, agency, board, commission, or other division of state government or any city, town, county, or other political subdivision or tribal government within the state may apply for a RDGP grant.

The funding source for this program is interest income from the RIT trust fund and mineral taxes. Grants of up to \$300,000 are available per application, and a total of \$3 million in grant funds is available each biennium. In FY 1999, the bureau administered 35 RDGP contracts, and \$2,846,424 was disbursed to authorized grant projects.

Mine reclamation and cleanup of abandoned oil and gas sites continue to be a major focus of the program. Reauthorization of funds not used in prior bienniums plus the statutory appropriation of \$3 million for this biennium enabled the 1999 legislature to approve 16 projects totaling \$3,233,197. The grants are listed in the order of their priority in Table 4. Twelve of these projects deal directly with construction and cleanup of abandoned mine sites or oil and gas sites (82 percent of available funds), three involve investigative measures and follow-up actions to improve water quality (15 percent of available funds), and one project targets repair of an irrigation diversion structure (3 percent of available funds). This allocation is illustrated in Figure 7.

Completed in FY 1999, the Balco Oil Disposal Facility near Sidney illustrates the difficulties and high cost of remediation activities at contaminated sites. RDGP funding exceeding \$1 million was expended to characterize, remove, transport, and dispose of 16,000 barrels of oil waste and contaminated materials. Because Montana does not have a licensed disposal facility for the types of wastes encountered, and because other remedial options such as recycling or incineration were either not feasible or cost prohibitive, arrangements were made whereby Saskatchewan, Canada, would accept and properly dispose of the contaminated materials. The Sidney site was then graded, topsoiled, fertilized, and seeded. Similar cleanups at future sites will benefit from the experience gained from this project.

Figure 7. Legislative Allocation of Funds for Approved Reclamation and Development Grants Projects

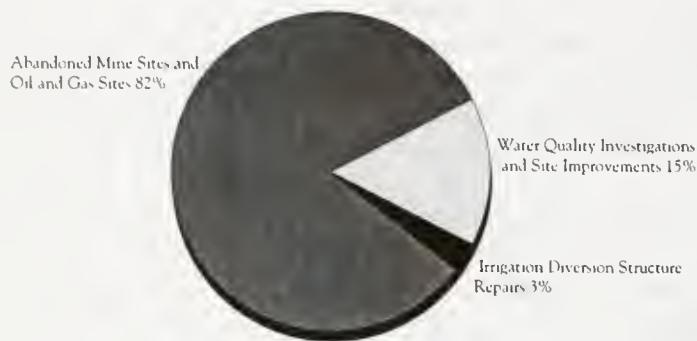


Table 4
Reclamation and Development Grants
Approved by the 1999 Legislature

Recipient	Project Name	Grant Amount
Montana Board of Oil and Gas Conservation	1999 "A" Orphaned Well Plug and Abandonment, and Site Restoration	\$300,000
Montana Board of Oil and Gas Conservation	1999 "B" Orphaned Well Plug and Abandonment, and Site Restoration	300,000
Montana Department of Environmental Quality	Toston Smelter Reclamation Project	300,000
Montana Department of Environmental Quality	Frohner Mine Reclamation Project	300,000
Montana Department of Environmental Quality	Great Republic Smelter Reclamation Project	300,000
Park Conservation District	Upper Yellowstone River Cumulative Effects Investigation	299,940
Toole County	Plugging and Abandonment, Aid to Independent Small Oil Operators	300,000
Butte-Silver Bow Local Government	Upper Clark Fork Basin: Superfund Technical Assistance	95,236
Fergus County Conservation District	Central Montana Artesian Basin Groundwater Project	150,000
Toole County	North Toole County Reclamation Project	150,000
Butte-Silver Bow Local Government	Mining City Mineyard Preservation and Enhancement	297,104
Townsend, City of	East Pacific Mine Reclamation	202,500
Montana Tech of the University of Montana	Champion International Gravel Pit Reclamation Project	57,494
Lewistown, City of	Big Spring Creek Drainage Source Location of Hazardous Organic Contaminants	50,000
Glasgow Irrigation District	St. Mary Diversion Repairs	110,818
Montana Board of Oil and Gas Conservation	Oil Well Abandonment	20,105
	TOTAL	\$3,233,197

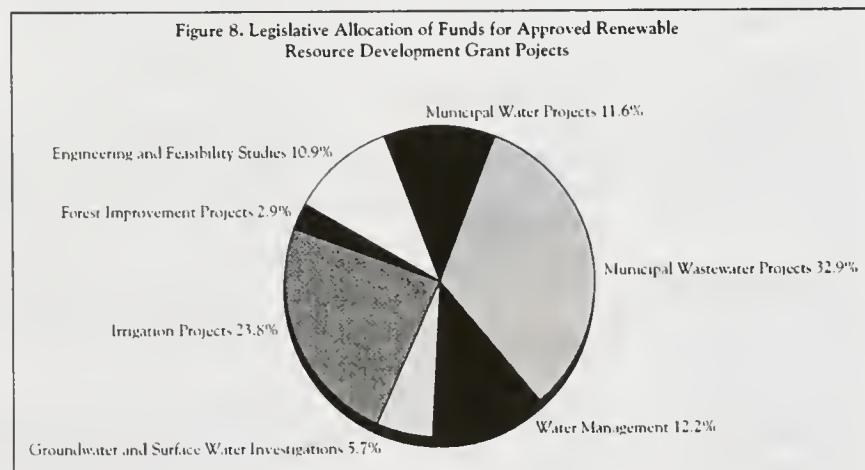
Renewable Resource Grant and Loan Program

The Montana Legislature established what is now called the renewable resource grant and loan program (RRGLP) in 1975 to promote the development of renewable natural resources. Funding from RIT interest and the mineral tax is available to research, plan, design, construct, or rehabilitate projects that conserve, use, manage, develop, or preserve land, water, fish, wildlife, recreation, and other renewable resources. RRGLP funds a variety of natural resource projects including groundwater studies, municipal drinking water and public wastewater improvements, irrigation rehabilitation, water and soil conservation, and forest enhancement.

During the 1999 legislative session, the department requested legislation to reorganize the disbursement of RIT interest funds. Senate Bill 49 increased funding to the renewable resource grant program by \$1.5 million, for a total of \$3.5 million for grants to public entities for renewable resource projects. The legislature also set aside an additional \$400,000 for grants to assist public entities in the planning and design of projects eligible for funding under the RRGLP. The loan program is funded through the issuance of general obligation and coal severance tax bonds. These loans are primarily for public drinking water, wastewater, and irrigation projects.

Public Grants

Up to \$100,000 is available per grant application. In 1998, the department received 62 grant applications requesting \$5.9 million dollars. The 1999 legislature approved funding for 49 projects; however, the program has the capacity to fund only the first 40 of those projects. In the event that one of the funded projects is found to be infeasible, funding would become available for the next highest ranking project. The allocation of funding for projects approved by the 56th Montana Legislature is illustrated in Figure 8. The projects that will receive funding are listed in Table 5.



The project planning grants funded in FY 2000 and FY 2001 will provide up to \$10,000 on a 50 percent cost share to public entities for the completion of preliminary engineering, design, and feasibility analysis. These grants are administered on an open cycle and will be awarded on a first-come, first-served basis until all of the available \$400,000 is expended.

In FY 1999, a total of 47 renewable resource grant contracts was administered by the bureau, and \$967,547 was disbursed. One example of a renewable resource grant funded by the 1999 legislature is Glasgow Irrigation District's project. A \$100,000 grant will be used to repair the siphons that carry water in a transbasin diversion from the Saint Mary River to the Milk River. This system, which was the U.S. Bureau of Reclamation's first irrigation project in the United States, is a key component in the supply of water for irrigation, municipal use, and wildlife in the Milk River basin. The diversion annually transports approximately

150,000 acre-feet of water from the Saint Mary drainage to the North Fork of the Milk River. Two new foundation supports are needed in areas where ground movement has occurred due to high groundwater levels in recent years. Two new expansion joints will be installed to alleviate stress in the system, and approximately 40 feet of 90-inch pipe will be replaced due to pipe buckling. Installation of a new cathodic protection system will prevent pipe corrosion.

Table 5
Renewable Resource Grant and Loan Program Projects
Funded by the 1999 Legislature

Rank	Applicant	Project Name	Grant Funding	Loan Funding	Total Project Cost
1	Glasgow Irrigation District	Saint Mary Siphon Repair	\$100,000		133,000
2	Malta Irrigation District	Repair and Modification of Dodson Diversion Dam	100,000	2,274,950	2,374,950
3	Cascade County Conservation District	Muddy Creek Restoration and Water Quality Improvement	77,000		208,220
4	Madison County	Harrison Wastewater System Improvements	100,000		1,600,000
5	Glasgow Irrigation District	Phase I- Vandalia Diversion Dam Rehabilitation	56,000		66,000
6	Petroleum County Conservation District	Musselshell River Assessment and Monitoring Plan	50,150		94,150
7	Montana Department of Natural Resources and Conservation	Deadman's Basin Water Quality Improvement	75,000	434,700	609,700
8	Tin Cup County Water and Sewer District	Tin Cup Lake Dam Restoration Project	25,000		422,800
9	Fort Shaw Irrigation District	Water Quality and Quantity Improvement	50,000		212,090
10	Sheridan County Conservation District	Sheridan County Groundwater Management Program	99,700		231,750
11	Cut Bank, City of	Water System Improvements	100,000		3,234,250
12	Buffalo Rapids Project	Improving Pump Discharge Line Efficiency	91,622		193,135
13	Montana Department of Natural Resources and Conservation	Seepage Monitoring Program	100,000		134,290
14	Sanders County	Floodplain Delineation of the Clark Fork River	100,000		110,670
15	Missoula, City of	Sewer System-East Reserve Street Phases II and III	100,000		5,215,107
16	Glen Lake Irrigation District	Costich Dam Improvement Project	100,000		113,976
17	Denton, Town of	Wastewater Treatment Project	100,000		943,400
18	Bitterroot Irrigation District	Water Conservation and Improvement	99,650		322,750
19	Frenchtown Irrigation District	Irrigation System Water Use and Water Quality Improvements	32,900		106,090
20	Boulder, Town of	Water System Improvement	100,000	907,000	1,927,000
21	Daly Ditches Irrigation District	Republican Canal Diversion Dam Replacement	100,000	730,691	878,786
22	West Crane Irrigation District	West Crane Sprinkler Irrigation Project	100,000		376,757
23	Hebgen Basin/West Yellowstone Refuse District	Composting Facility for Municipal Solid Waste	99,425	2,080,000	2,338,483
24	Teton County Conservation District	Irrigation Methods and Pesticide Transport to Groundwater	100,000		160,361
25	Glasgow, City of	Combined Sewer Separation Project	100,000		1,600,000

Table 5
Renewable Resource Grant and Loan Program Projects
Funded by the 1999 Legislature (continued)

Rank	Applicant	Project Name	Grant Funding	Loan Funding	Total Project Cost ¹
26	Columbia Falls, City of	Sewer Treatment Plant Upgrade	100,000		3,577,000
27	Sweetgrass County Water/Sewer District	Wastewater Treatment Facility Rehabilitation/Upgrade	100,000		631,000
28	Sheridan, Town of	Water Supply Improvements	30,000		40,400
29	Corvallis County Sewer District	Upgrade and Expansion of Wastewater Treatment Facility	100,000		816,520
30	Geraldine, Town of	Wastewater Improvements	50,000		811,007
31	Roosevelt County Conservation District	Fort Peck Assiniboine and Sioux Rural Water Supply Project	82,109		242,109
32	Brockton, Town of	Water and Wastewater System Improvements	100,000		1,020,250
33	Neihart, Town of	Water Distribution Improvements	76,770		101,720
34	Lewis and Clark County Water Quality Protection District	Helena Area Groundwater Quality Monitoring Network	100,000		125,773
35	Eureka, Town of	Wastewater Collection, Treatment, and Disposal Improvements	100,000		1,380,000
36	Ekalaka, Town of	Ekalaka Water Source Improvement	100,000		115,000
37	Garfield County Conservation District	Rehabilitation of Irrigation Diversion Dam and Outlet Works	100,000		110,500
38	Drummond, Town of	Sanitary Sewer Rehabilitation Project	100,000		585,700
39	Lake County Conservation District	Forestry Implementation Project	100,000		248,001
40	Rae Water and Sewer District	Wastewater Treatment System Improvements	100,000		971,700

Funding for projects below this line will depend on the availability of revenue.

41	Canyon Creek Irrigation District	Canyon Lake and Wyant Lake Restoration Project	100,000	227,000	402,000
42	Chinook Division Irrigation Association	Rehabilitation and Betterment of Water Conveyance Systems	100,000		137,590
43	Montana Department of Natural Resources and Conservation	Missouri Pipe Span Rehabilitation Project	100,000		509,426
44	Big Timber, City of	Lagoon Reconstruction and Lining	100,000		1,796,275
45	LaCasa Grande Estates Water and Sewer District	New Water Supply System	100,000		1,045,000
46	Missoula, City of	Rattlesnake Creek Flood Plain Restoration and Control	74,000		88,000
47	Eureka, Town of	Water System Facility Plan	25,000		35,000
48	Havre, City of	Source-Water Delineation for Havre and Seeley Lake	20,000		141,120
49	Troy, City of	Water System Master Plan	23,646		30,000

1. The total project cost usually includes funds from other sources, in addition to RRGLP grants and loans.

Emergency Grants

In addition to the grants authorized by the legislature, the department has authority to provide \$125,000 in emergency grants to governmental entities if delaying the project until legislative approval can be given would cause loss of property or create legal liability. In FY 1999, DNRC made four emergency grants, three of which were funded by RRGLP and one of which was funded by RRGLP in combination with the environmental contingency grant program administered by the Governor's Office.

- In August 1998, a renewable resource emergency grant in the amount of \$30,000 was awarded to the Town of Philipsburg for emergency repairs to Fred Burr Lake Dam, a high hazard dam providing storage for the community's only source of drinking water.
- In May 1999, a renewable resource emergency grant in the amount of \$7,000 was awarded to Stillwater Conservation District to stabilize a reach of channel in the Rosebud River south of Absarokee. This action was necessary to prevent possible flooding and property damage to homes adjacent to the Absarokee Town Ditch.
- In June 1999, a renewable resource emergency grant in the amount of \$4,500 was awarded to Judith Basin Conservation District to re-channelize and further stabilize a reach of the Judith River south of Utica. Prevention of channel erosion, provision of fish passage, and protection of adjacent wetlands were the results of this action.
- In June 1999, an emergency grant in the amount of \$75,000 was awarded to the Town of Opheim. Termed the most serious drinking water system problem in the state by the Montana Department of Environmental Quality (DEQ), Opheim's source wells are contaminated with the pesticide Dinoseb. The emergency grant, funded by RRGLP in the amount of \$39,364 and by the environmental contingency grant program in the amount of \$35,636, will be used to locate and drill test wells, the first step in the development of a new source of drinking water for the community.

Private Grants

Financial assistance is available to any individual, association, partnership, or corporation (both for-profit and nonprofit). The legislature allocated \$100,000 for private grants. By law, grant funding for a single project may not exceed 25 percent of the total estimated cost.

Most of the funds are targeted to assist small, privately owned water systems. Owners of small systems have difficulty in meeting Safe Drinking Water Act regulations, but must meet the same requirements that municipal water systems face. The department has identified 79 private water systems for potential funding. The average size of a grant is just over \$2,730; the grant must be matched on a 3-to-1 basis. DNRC awarded nine grants totaling \$21,832 in FY 1999.

Private Loans

Loans for private water development projects are available from the department. Loans to individual private entities may not exceed the lesser of \$200,000 or 80 percent of the fair market value of the security given for the project. Private loans to individuals must be secured with real property. Loans up to \$300,000 are now available for such organizations as water user associations and ditch companies. These loans are scored based on the revenue produced by the system. Irrigation system improvements — for example, the conversion from flood irrigation to sprinkler irrigation — are the most common type of projects funded through private loans.

To finance loans, the law provided authority to issue general obligation renewable resource bonds up to a total outstanding balance of \$20 million. Approximately \$13.23 million in general obligation bonds have been issued to date, and the current outstanding balance on the loans is \$6.9 million. In FY 1999, 108 loans were being administered, and DNRC closed 8 new loans totaling \$770,511.

Public Loans

This program makes loans to communities for renewable resource projects. The program was started in 1981 by the Montana Legislature, which granted a total of \$250 million in coal tax bonding authority. In FY 1999, 73 public loans with a balance of approximately \$52 million were outstanding. No new public loans were made in FY 1999. The legislature has approved \$20 million in loans for which funds have not yet been drawn. DNRC is estimating that approximately \$6 million in loans will close before the end of the biennium.

Examples of the types of projects completed and financed by the program are dam rehabilitation projects and irrigation system improvements, including diversion structures. DNRC has also financed water and wastewater systems around the state. Current public loans are listed in Table 6. Some entities have received more than one loan.

State Wastewater Revolving Fund Loans

The State Wastewater Revolving Fund (SRF) was created by the 1989 legislature. It is designed to combine federal grant money with state matching money to create a low-interest loan program that funds community wastewater treatment projects. DNRC and DEQ co-administer the SRF program. The U.S. Environmental Protection Agency (EPA) makes a grant of federal funds to the state. The state must match 20 percent of that grant. The state's share is derived from the sale of state general obligation bonds. Loans are made by DNRC to public entities at an interest rate of 4 percent for 20 years.

Since the program started, the State of Montana has issued \$12 million in general obligation bonds, and EPA has contributed \$43.2 million in grants, which accounts for the \$55.2 million program level. Six loans were closed in the 1999 construction season. The 1997 legislature authorized this program to start financing landfills for small communities effective July 1, 1997, but no landfill loans have been made to date. See Table 7 for a listing of current loans and proposed loans.

Table 6
Public Loans

Applicant	Balance Due	Applicant	Balance Due
Anaconda - Deer Lodge County	\$266,197	Lakeside County Water and Sewer District #1	\$189,057
Antelope	65,863	Lakeside County Water and Sewer District #2	62,031
Beaverhead County/Red Rock Water and Sewer	2,119,751	Libby	286,522
Belgrade	400,306	Lima	160,108
Bitterroot Irrigation District	793,460	Lockwood Irrigation District	152,088
Bozeman #1	270,321	Miles City	1,122,630
Bozeman #2	492,597	Mill Creek Water and Sewer District	715,967
Broadwater Power Project #1	21,735,000	Neihart	135,644
Broadwater Power Project #2	1,400,000	Park County	87,548
Charlo Water District	16,621	Pondera County Canal and Reservoir #1	389,877
Columbia Falls	948,060	Pondera County Canal and Reservoir #2	317,255
Conrad	119,303	Poplar	244,286
Culbertson #1	287,934	Sage Creek Water District	551,345
Culbertson #2	45,763	Sanders County Water District at Noxon	108,591
Cut Bank - North Glacier Water and Sewer District	62,225	Shelby	266,759
Denton	119,493	Shields Canal Water Users Association	18,639
Dutton #1	117,591	State Water Projects Bureau, DNRC - East Fork Rock Creek Dam	900,000
Dutton #2	21,038	State Water Projects Bureau, DNRC - Petrolia Dam	334,663
East Bench Irrigation District	537,512	State Water Projects Bureau, DNRC - Upper Musselshell Water Users Association	101,333
East Helena	289,631	State Water Projects Bureau, DNRC - Yellowwater Water Users Association	15,530
Ekalaka	113,966	Sun Prairie Sewer District	420,425
Ennis #1	81,109	Sun Prairie Water and Sewer District	165,725
Ennis #2	670,929	Three Forks #1	146,468
Fairview	201,918	Three Forks #2	94,735
Flathead County for Evergreen	3,081,890	Tin Cup Water and Sewer District	294,558
Forsyth #1	323,939	West Yellowstone #1	302,401
Forsyth #2	280,745	West Yellowstone #2	392,457
Fort Benton #1	384,957	White Sulphur Springs	246,247
Fort Benton #2	501,648	Whitefish	399,924
Gardiner - Park County Water District	245,370	Whitehall	44,170
Glasgow	1,887,673	Wibaux	198,452
Glendive	1,324,894	Winnett	39,131
Harlem	258,023	Yellowstone County #1	130,424
Havre	1,326,382	Yellowstone County #2	67,726
Huntley Irrigation District	1,276,351		
Hysham	187,994		
Kevin	95,413		
Lakeside County Sewer District #1	52,041		
Lakeside County Sewer District #2	480,141		
		TOTAL	\$52,086,765

Table 7
State Wastewater Revolving Fund Loans

Loans Completed	Amount	Loans Completed	Amount
Big Sky # 1	\$5,513,000	Missoula	
Big Sky # 2	417,000	California Street	\$502,000
Bigfork	1,000,000	Mullan Road	1,820,000
Butte-Silver Bow	5,307,390	NW Broadway	943,000
Cascade # 1	201,609	Rattlesnake	304,000
Cascade # 2	1,218,000	Reserve Street	2,221,000
Columbus	2,064,000	Special Improvement District #520	2,647,000
Cut Bank # 1	531,000	Wapikiya/Bellevue Add-On	324,000
Cut Bank # 2	800,000	Wapikiya/Bellevue Clarifier #1	2,465,000
Darby	111,000	Wapikiya/Bellevue Clarifier # 2	1,177,000
Denton #1	55,000	Missoula County	
Dillon	1,856,000	Linda Vista # 1	241,000
Flathead County		Linda Vista # 2	1,943,000
Bigfork	424,000	Park County # 1	378,000
Evergreen #1	3,600,000	Park County # 2	83,000
Evergreen # 2	700,000	Red Lodge	390,000
Fort Benton	1,177,000	Ronan	623,000
Glasgow # 1	402,000	Saint Marie (Glasgow)	150,000
Glasgow # 2	1,048,000	Shelby	481,000
Glendive # 1	236,000	Townsend	1,240,000
Glendive # 2	376,000	Troy	1,824,000
Harlowton	777,000	Valier	200,000
Havre	2,224,000	Vaughn - Cascade	298,000
Kalispell	3,913,000	Victor	300,000
		Wolf Point	453,000
		Worden - Ballantine	260,000
		TOTAL	\$55,217,999
Proposed Loans - FY 2000			Amount
Columbia Falls			\$2,677,000
Denton #2			709,000
Glasgow #3			995,000
Glasgow #4			500,000
Harrison Water and Sewer District			322,000
Helena			11,970,000
Hot Springs			200,000
Kessler School			215,000
Lincoln - Lewis and Clark Sewer District			310,000
Superior			82,000
		TOTAL	\$17,980,000

Safe Drinking Water Revolving Fund Loans

This fund provides for training, technical assistance, and the issuance of low interest loans to local governmental entities to finance drinking water facilities and implement the Safe Drinking Water Act. State enabling legislation was passed in 1995 and amended in 1997, after the U.S. Congress passed federal enabling legislation in August 1996. DNRC and DEQ co-administer the safe drinking water program. The two agencies applied for the federal funds in January 1998. The state has issued \$3 million in general obligation bonds, and EPA has obligated \$15 million. Seven loans were closed in FY 1999 for \$7.5 million (see Table 8).

Table 8
Safe Drinking Water Revolving Fund Loans

Loans Completed	Amount
East Helena #1	\$228,000
Havre #1	600,000
Lakeside	400,000
Laurel	5,250,000
Missoula County Sunset West	291,000
Twin Bridges	300,000
Whitefish #1	400,000
TOTAL	\$7,469,000
<hr/>	
Proposed Loans - FY 2000	Amount
Cut Bank	\$283,000
East Helena #2	3,234,000
Glendive	1,800,000
Havre #2	7,000,000
Plentywood	750,000
Seeley Lake	1,440,000
Virginia City	83,000
Whitefish #2	6,000,000
TOTAL	\$20,590,000

Treasure State Endowment Program Loans

The treasure state endowment program is administered by the Montana Department of Commerce. However, if a loan is recommended by the Department of Commerce and authorized by the legislature, DNRC is responsible for closing and administering the loan. This relationship was developed because of the loan expertise and financial management system that DNRC has developed over the last 15 years in administering the renewable resource grant and loan program. The 1999 legislature reauthorized four treasure state endowment program loans totaling \$1.9 million (see Table 9).

Table 9
Treasure State Endowment Loans

Applicant	Amount
Choteau	\$110,000
Coran	170,000
Fort Peck	1,325,000
Livingston	300,000
TOTAL	\$1,905,000

Conservation District Water Reservations

In 1978, the Board of Natural Resources and Conservation granted water reservations to 14 conservation districts (CDs) in the Yellowstone River basin. Nine CDs were granted reservations in the upper Missouri River basin in 1992, and eleven CDs were given reservations in the lower and Little Missouri River basins in 1994. Some CDs have reservations in more than one basin. The Resource Development Bureau provides legal, technical, and programmatic assistance to conservation districts in administering water reservations.

At the end of the 1998 irrigation season, there were a total of 146 CD water reservation projects in the Yellowstone River basin. These projects put to use 39,843 acre-feet of water, which is 7 percent of the CDs' total allocated water.

Nineteen reserved water use authorizations had been issued by CDs in the Missouri River basin by the end of the 1998 irrigation season. These projects have developed 10,591 acre-feet of water, which is 3 percent of the CDs' total allocated water.

During FY 1999, the Richland County Conservation District and DNRC approved the West Crane sprinkler irrigation project for reserved water use on the Yellowstone River south of Sidney. A group of 24 farm families in Richland County invested private funds to create a large irrigation district to use Richland County CD's reserved water. This project will use 23,930 acre-feet of water to develop approximately 11,965 acres now being dryland-farmed, which is the largest reserved water irrigation project in Montana's history.

FORESTRY DIVISION



FORESTRY DIVISION

Protecting Montana's natural resources from wildland fires through regulation and partnerships with federal, state, and local agencies, and helping Montanans achieve land stewardship and compliance with state forestry laws.

The Forestry Division, headquartered in Missoula, is responsible for planning and implementing forestry programs through a network of field offices located across the state. The forestry program has two major functions: fire and aviation management, and service forestry. Each function is further broken down into programs and subprograms, most with statewide application. The Forestry Division has the following goals:

- Protecting the state's natural resources from wildfire, insect pests, and disease
- Sustaining or improving the natural resources of private forest land for the good of all Montanans
- Promoting and supporting conservation practices on all lands in Montana
- Enforcing the state's forest practices laws in a manner that is both fair and consistent to all parties, and that complies with the intent of the legislation
- Encouraging the maintenance, planting, and management of trees and shrubs in Montana communities

Fire and Aviation Management

As charged by state law, DNRC protects the natural resources of the state from fire and is responsible for fire protection on all forest lands within this state that are officially classified by the department as forest lands.

Protection

DNRC's Fire and Aviation Management Bureau is a team of trained professionals providing wildland fire service leadership to Montana, commissioned by Montana citizens to protect the natural resources of the state by preventing and suppressing wildland fires, and accountable to Montana citizens. Presently, all wildlands in Montana have some form of fire protection. DNRC protects natural resources on state and private lands through aggressive fire prevention and protection activities. A total of 50,542,404 acres of state-owned and private lands are protected as detailed in state resource management plans, or as required by law (see Table 10). The Fire and Aviation Program staffs 65 engine (and water tender) companies and 5 helicopters to provide direct protection of 5.1 million acres. The program also loans over 350 engines and water tenders to local fire agencies, primarily in the eastern part of the state. DNRC has been given the responsibility to coordinate all contract responses of fire department resources that cross county lines.

Direct Protection

DNRC provides direct protection to a total of 5,138,392 acres consisting of 3,493,405 acres of state and private land; 694,665 acres of U. S. Bureau of Land Management (BLM) lands; and 950,322 acres of U. S. Forest Service (USFS) lands. Privately owned forested lands within the boundaries of an incorporated city are included. Priority is given to the protection of forested lands owned by the state.

State/County Cooperative Fire Protection

Under the State/County Cooperative Fire Protection Program, the department has secondary protection responsibility for 45,309,480 acres of state-owned and privately owned non-forested lands. These lands are predominantly found in eastern Montana. A network of 400 fire departments provides initial response to wildfires. DNRC assists on fires that escape the counties' capabilities.

Contracted Federal Protection

Fire protection of a total of 1,739,519 acres of state and private lands is subcontracted to federal agencies.

Table 10
Fire Protection by DNRC in FY 1999

Total Acres	Category	State and Private Lands (Acres)	Public Lands (Acres)
5,138,392	DNRC Direct Protection State and Private Lands BLM Lands USFS Lands	3,493,405 	694,665 950,322
1,739,519	Federal Direct Protection ¹ Protected by BIA (Tribal) Protected by BLM Protected by USFS	151,532 	85,810 1,502,177
45,309,480	State/County Cooperative Fire Protection ²	45,309,480	
52,187,391	TOTALS	50,542,404	1,644,987

¹ Subcontracted to federal agencies

² Includes all 56 counties

Fire Prevention

The fire prevention program's purpose is to reduce the number and severity of wildfires occurring each year. The program is made up of three parts:

- Engineering through prescribed fire and application of DNRC's wildland/residential interface development guidelines
- Education
- Engineering and compliance measures applied to avert wildfire damage on lands protected by DNRC and cooperating counties

Wildland/residential interface areas are emphasized, and information is provided to local officials so that they can make informed decisions regarding local planning and development issues.

DNRC has completed its fire risk rating on 95 percent of the direct protection areas that are high risk. Several hundred plats of proposed developments are being evaluated, and recommendations are being submitted to county commissions regarding conditions for fire-safe developments. The Fire Protection Guidelines for Wildland/Residential Interface Development continue to be of high interest to many county organizations. The guidelines continue to be applied to existing and proposed developments throughout the state.

Major issues in FY 1999 included implementation of both the new Federal Fire Policy and the new Six-Party Master Fire Agreement with the federal fire agencies. These efforts will continue in FY 2000.

Fire Suppression

Through the fire suppression program, DNRC directly protects 5,138,392 acres of state, private, and federal lands; assists all 56 cooperating counties with fires exceeding their capabilities on 45,309,480 acres of state and private lands; and subcontracts fire protection on 1,739,519 acres of state and private lands to the U.S. Forest Service, U.S. Bureau of Land Management, and U.S. Bureau of Indian Affairs (Tribal). DNRC also provides support and assistance to federal fire agencies and other states when appropriate.

The number of fires that occurred during the calendar year 1998 fire season was slightly below the five-year average; 374 fire incidents that burned a total of 36,594 acres were reported (see Figures 9 and 10). The average number of fires over the last five years is 403 per year, and the average number of acres burned over each of the last five years is 40,787. The annual acreage burned varied from 3,419 acres in 1997 to over 119,444 acres in 1996.

Figure 9. Number of Fires on State-Protected Lands

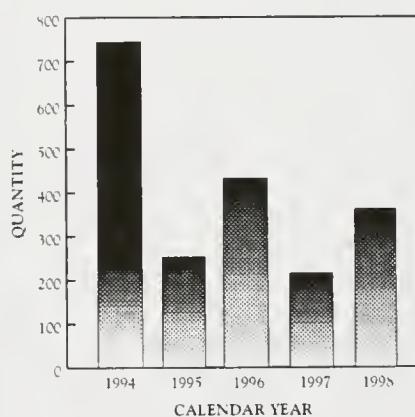
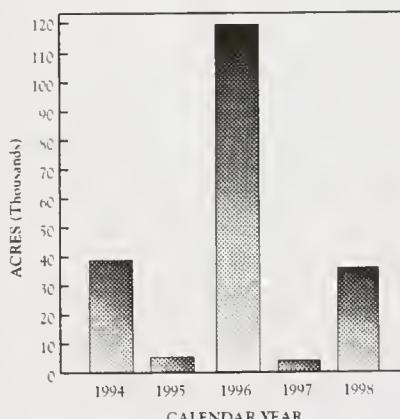
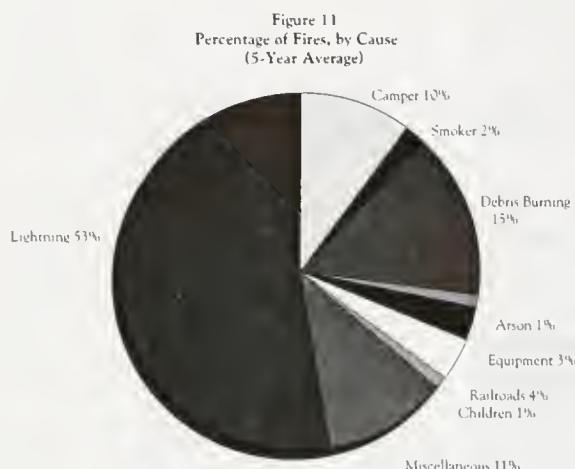


Figure 10. Acres Burned on State-Protected Lands



Lightning is the single most frequent cause, starting 53 percent of the fires, with debris burning being the next most frequent, causing 15 percent (see Figure 11). DNRC contains an average of 94 percent of the fires at under 10 acres in size.



DNRC also provided support to Disaster and Emergency Services on a few nonfire incidents in FY 1999. These incidents involved law enforcement and a threat of flooding from potential dam failure.

Fire Training

The Fire and Aviation Management Bureau provides training in fire prevention, detection, investigation, suppression, aviation, communications, safety, prescribed fire, participation on incident management teams, and wildland fire training instruction.

Wildland fire training is presented annually to approximately 1,500 volunteer and career firefighters in Montana's 56 counties through the County/State Cooperative Fire Protection Program. DNRC trains department seasonal firefighters and support personnel for fire protection responsibilities on over 5 million acres of forest lands under direct DNRC protection. DNRC is actively involved in the development of overhead, or management, personnel within the agency and in cooperating wildland fire agencies, in local communities, statewide, and at the regional Northern Rockies Interagency Training Center in Missoula.

During FY 1999, DNRC also assisted Disaster and Emergency Services in providing all-risk or non-wildland fire incident management training.

Development and Support

Through its equipment development program, DNRC obtains federal excess property and develops it into fire suppression equipment and vehicles. This equipment is used primarily to support the State/County Cooperative Fire Protection Program. In FY 1999, DNRC obtained supplies and vehicles that have a total value of \$542,371 through the Federal Excess Property Program. The equipment acquired included a total of 20 vehicles and trailers.

The 22 individual development projects that were completed in FY 1999 are listed in Table 11.

Table 11
Development Projects in FY 1999

Type 6 (200-gallon) wildland engines	9
Type 3 (800- to 1,000-gallon) engines	9
Refrigerator truck	1
Helicopter fuel tender (2,600 gallons)	1
Chassis (painted)	2

Aviation

The aviation program operates and maintains a fleet of eight aircraft (three fixed-wing and five rotary wing). The fixed-wing aircraft, which are located in Kalispell, Missoula, and Helena, are used for fire patrol and personnel transportation. Three medium Huey helicopters are stationed in Kalispell, Missoula, and Helena for fire support and suppression work. Two light helicopters (Bell 206s) are stationed in Helena. One of these is owned by the Department of Environmental Quality (DEQ). DNRC pilots fly this helicopter on DEQ and DNRC missions. The second light helicopter is used for backup or additional coverage.

In FY 1999, the aircraft flew a total of 1,284 hours. Other program statistics are shown in Table 12.

Table 12
Aviation Program Accomplishments
in FY 1999

Detection	360 hours
Initial attack	589 hours
Support missions	133 hours
Administrative	202 hours
Water delivered	933,549 gallons

Service Forestry Programs

DNRC's service forestry programs provide products and services to various client groups and individuals. The State Nursery grows seedlings for private conservation plantings and reforestation of state-owned lands. Education emphasizing the stewardship and care of forest lands is presented to private forest owners and resource professionals. Communities are assisted with the care and planting of their community forests. Montana's forest laws are upheld. Private forest land improvements are administered using federal cost-share funds. Forest health problems are identified and monitored statewide.

The Service Forestry Bureau's community forestry coordinator chairs the Western Urban and Community Forestry Committee. That committee recommends regional and national policy to the Western Council of State Foresters.

Montana Conservation Seedling Nursery

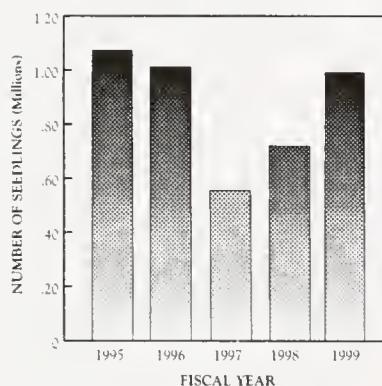
DNRC's nursery produces, sells, and distributes seedlings for conservation plantings such as reforestation, farmstead and field windbreaks, shelterbelts, wildlife habitat, living snow fences, stream bank stabilization, and other conservation uses. The nursery provided seedlings to the Conservation Reserve Program, Forest Stewardship Program, Wildlife Habitat Incentives Program, Pheasants Forever, and numerous other conservation programs.

In FY 1999 the nursery sold 989,751 plants, as itemized in Table 13. Numbers sold over the last five years are shown in Figure 12. The increased sales occurred primarily in the areas of reforestation on private and reservation lands, and riparian and streambank plantings.

Table 13
Nursery Sales in FY 1999

Conservation seedlings	820,018
Seedlings for reforestation of school trust lands	169,733
TOTAL	989,751

Figure 12. Seedlings Sold



Nursery revenue was \$244,427, setting a new record, for the second year in a row, for the highest revenue ever received for conservation sales. Revenue increases over the last two years have allowed the nursery to purchase a new farm tractor. The tractor will help the nursery hold prices down for bareroot seedlings.

Forest Pest Management

This program provides pest surveys, training, and technical services to help recognize and manage damaging insects and diseases in Montana's forests. These activities are done in cooperation with the U.S. Forest Service's Northern Region Forest Health Protection Group.

Western Montana showed an increase in Douglas-fir beetle, western pine beetle, and mountain pine beetle in lodgepole pine. Other bark beetle infestation areas remained at approximately the same levels as last year.

Defoliating insects increased in the summer of 1998, including 500 acres of western spruce budworm defoliation and small areas of forest tent caterpillar and satin moth infestations. No visible Douglas-fir tussock moth defoliation was observed, and no gypsy moths were trapped in the state in 1998. Larch casebearer defoliation areas increased in the far western portion of Montana.

Various foliage needle blights and fungi caused defoliation to cottonwoods, willows, and aspen across the state. Ponderosa pine needle blight and lodgepole pine needle cast caused heavy local infections across western Montana.

Mortality and growth losses from root disease and dwarf mistletoes continued to be high throughout the state. Root-disease-caused mortality was more common west of the Continental Divide, and dwarf mistletoe caused approximately 33 million cubic feet of lost growth.

Some of the FY 1999 program accomplishments are listed in Table 14.

Table 14
Forest Pest Management Activities
in FY 1999

Technical assistance to private and industrial land managers	76 assists
Professionals trained in basic pest identification	25
Professionals trained in advanced pest management	18
Loggers and private landowners trained in pest identification and management	48
Pest samples identified and management treatments recommended	18
Aerial survey completed and sketch maps distributed to unit offices	3 million acres
DNRC timber sale analysis written	1

The program, along with USFS, also completed and distributed the annual *Montana Insect and Disease Conditions* report.

A mutual contract was developed by Montana and Idaho for forest pathology services, funded by a USFS grant. Work is expected to begin January 1, 2000.

Forestry Assistance

The forestry assistance program provides a range of services to private forest landowners and economic development organizations. By conveying forestry knowledge, this program helps Montanans perform forestry work that results in good land stewardship, a healthful environment, personal profit, and general economic growth.

In FY 1999, DNRC provided 698 forestry assists, including 122 timber sale assists. Service foresters provided 2,320 person days of education, the most notable of which were the Flathead Forestry Expo and Best Management Practices (BMP) workshops. Federal pass-through funding was used to finance five landowner stewardship workshops that 136 private landowners attended. The landowners wrote 83 stewardship forest management plans covering 24,178 acres. These plans, certified by stewardship advisors, represent thoughtful future management of those lands. The second in a series of stewardship videos was produced with federal stewardship funds by Montana State University Extension Forestry professionals. The videos will attract landowners to the workshops and help train them to inventory their forest resources.

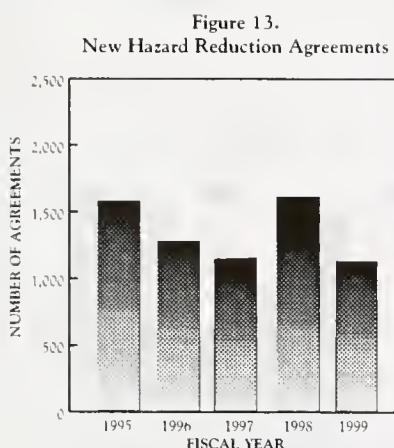
Forty-seven private landowners implemented 1,432 acres of on-the-ground practices in the forest stewardship incentive program. The major activities involved thinning 367 acres and planting 92,430 reforestation seedlings on 308 acres. Federal financial cost-share assistance of \$87,303 was approved for these projects. Also, eight cost-share stewardship plans were developed covering 3,855 acres.

Besides helping individual landowners, the program assists organizations benefiting landowners. Staff served as an ad hoc member of the Board of Directors of the Montana Forest Owners Association. Financial assistance helped an Extension Service specialist develop a new high school forestry module.

Timber Slash

The timber slash program implements state laws pertaining to control of timber slash and debris on private land to minimize wildfire hazards. The department carries out its responsibilities by entering into a bonded contract, called a Hazard Reduction Agreement (HRA), with the private party in charge of each cutting. The program handled 1,093 new HRAs in FY 1999 (see Figure 13), while another 1,480 HRAs were certified and closed. Those numbers are a 32 percent decrease in new HRAs and a 5 percent decrease in closings, compared to FY 1998 levels, which can be attributed to the declining price of lumber.

The timber slash program collected an estimated \$167,000 in administrative fees in FY 1999. In addition, a total of \$59,102 was collected and distributed to Montana State University's extension forestry program.



Forest Practices

The forest practices program provides information and education about forestry BMPs to private persons, corporations, and other agencies. The program also includes standards for all forest practices conducted in streamside management zones (SMZs). The program helps people comply with voluntary and mandatory measures that protect soil and water resources during timber harvesting operations. In FY 1999, the services listed in Table 15 were provided.

Table 15
Forest Practices Activities
in FY 1999

BMP pre-harvest informational packages mailed to landowners	1,093
On-site consultations	112
Post-harvest evaluations	28
Alternative practices issued	39
SMZ enforcement actions taken	30

In cooperation with the Montana Loggers Association, the program conducted eight BMP field workshops for loggers.

Community Forestry

The goal of DNRC's community forestry program is to have a viable program in every Montana community. DNRC's community forestry program is funded by a U.S. Forest Service grant established under the 1990 Farm Bill. The program assists community leaders, volunteers, local governments, and the tree care industry with technical assistance, planning, funding for local programs, volunteer coordination, and education.

The program works closely with several major partners:

- U.S. Forest Service
- U.S. Natural Resources Conservation Service
- Montana Association of Nurserymen
- Montana's Resource Conservation and Development Areas
- Montana State University Extension Service
- Montana Community Forestry Council

Staff also participate in the Montana League of Cities and Towns, local tree and park boards, and volunteer organizations.

The Montana community forestry program does not receive any state funding. Through partnerships, cost-shares, donations from special projects, and a \$186,500 federal grant, the program leverages more than \$700,000. When in-

Major categories of assistance are shown in Table 16.

**Table 16
Major Categories of Community Forestry Activities in FY 1999**

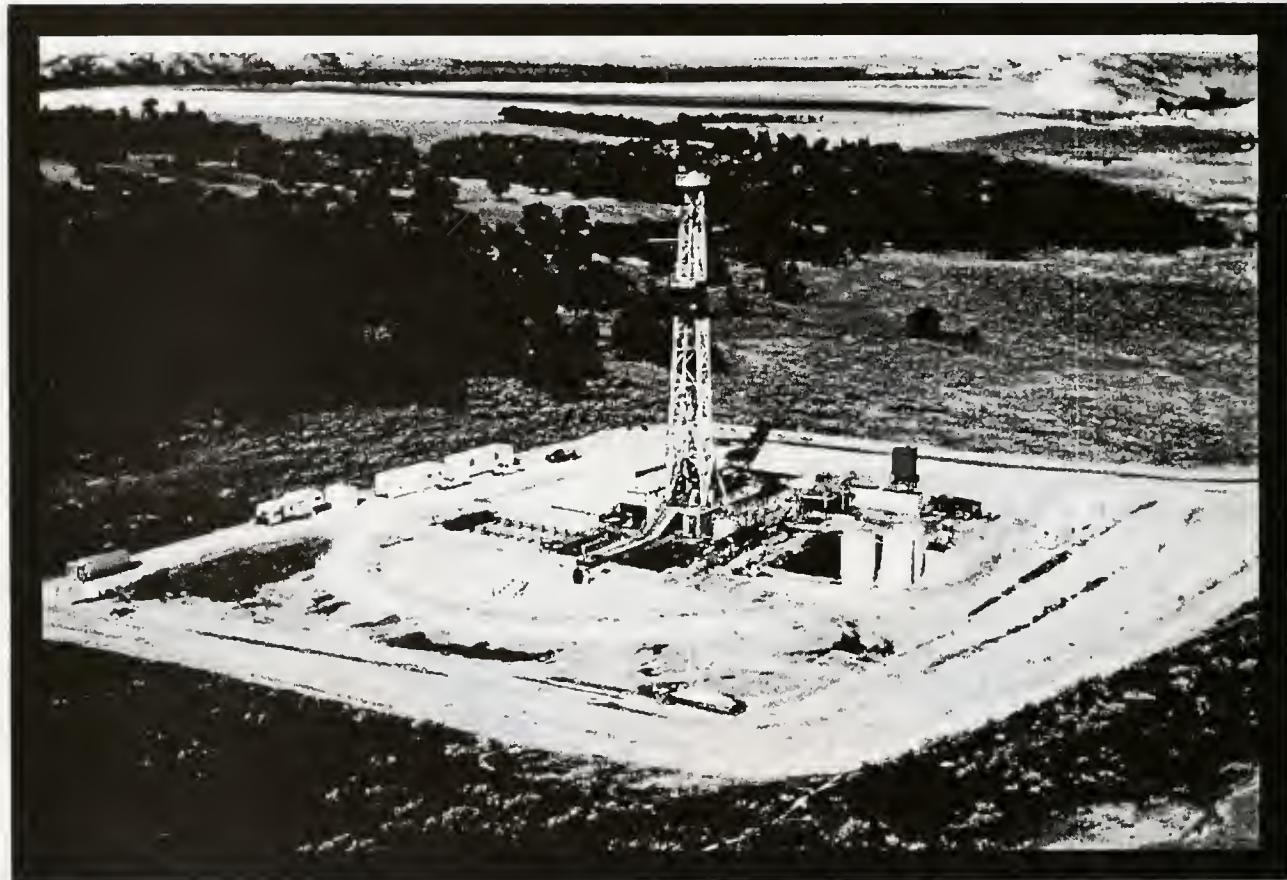
Communities with active programs	62
Montana "Tree City USAs" ¹	22
Communities receiving technical assistance	114
Technology transfer activities (workshops, presentations, conferences, training sessions)	200

¹ "Tree City" is a national program through the Arbor Day Foundation.

Highlights of the community forestry program for FY 1999 follow.

- The Montana community forestry program has partnered with several organizations and agencies to explore the realm of market-based conservation, particularly carbon sequestration. The program will plant trees in communities as part of a pilot carbon sequestration project next year.
- The second Montana Tree Climbing Championship was hosted last spring. Participation has increased, as more of Montana's tree care industry realize the benefits of the continuing education and training that accompany this event.
- DNRC personnel offer study sessions prior to testing and serve as proctors during the International Society of Arboriculture exam. More than 70 arborists have been certified in Montana through this program.
- The program secured a \$30,000 grant from the Montana Power Company to plant trees in 13 southwest Montana communities. The project is coordinated through the U. S. Natural Resources Conservation Service (NRCS) and the state RC&D program. Trees will be planted next year.
- The Montana community forestry program has worked extensively with the Congressional Lewis and Clark Caucus, as well as the Governor's Lewis and Clark Commission, to bring funding to the state in connection with the bicentennial celebration of the Lewis and Clark Expedition. The first grants have now been awarded to Great Falls and Bonner for community projects.

OIL AND GAS CONSERVATION DIVISION



OIL AND GAS CONSERVATION

Prevent waste and provide for the conservation of crude oil and natural gas through regulation of exploration and production.

The quasi-judicial Board of Oil and Gas Conservation (BOGC) and its technical and administrative staff in the Oil and Gas Conservation Division are attached to the Department of Natural Resources and Conservation for administrative purposes. The board consists of seven members appointed to four-year terms by the governor. BOGC board members during the period covered by this report are:

David Ballard, Chairman Billings Petroleum Geologist and Geophysicist	Stanley Lund Reserve Rancher
Denzil Young, Vice Chairman Baker Attorney	Warren H. Ross Chinook Rancher
George Galuska Billings Petroleum Geologist	Dean A. Swanson Polson Petroleum Landman
Allen Kolstad Ledger Farmer	

The board's primary responsibilities lie in the conservation of resources and prevention of waste through the regulation of oil and gas exploration and production. In regulating these activities, the board relies heavily on its Oil and Gas Conservation Division staff. The division is headquartered in Billings, with field inspectors in Glendive, Plentywood, Roundup, and Shelby, and an administrative office in Helena. The board accomplishes oil and gas regulation through permits, bonds, rules, and orders. The field inspectors, who conduct on-site visitations and investigations, can issue deficiency reports. The board is empowered to levy both civil and criminal fines.

The board's regulatory actions are aimed toward four primary goals:

- Prevention of waste of oil and gas resources
- Conservation of oil and gas through encouragement of maximum efficient recovery of those resources
- Protection of the correlative rights of the mineral owners, i.e., the right of each owner to recover its fair share of the oil and gas underlying its lands
- Prevention of harm to nearby surface or underground resources from oil and gas operations

It accomplishes these goals by establishing spacing units, issuing drilling permits, administering bonds (required to guarantee the eventual proper plugging of wells and restoration of the surface), classifying wells, and adopting rules. BOGC also repairs orphaned, abandoned, and problem wells. It maintains a library of well cutting samples and core samples in Billings. (The cores, themselves, are stored in the U.S. Geological Survey Depository in Arvada, Colorado.) Since 1993, the board has certified companies to receive tax incentives for horizontal wells and enhanced recovery projects.

The oil and gas program is supported chiefly by the oil and gas conservation tax (0.3 percent of the value of the oil and gas produced and sold, less government royalties).

The Underground Injection Control Program

In 1996, the Board of Oil and Gas Conservation received primacy from the U.S. Environmental Protection Agency (EPA) and began operating the Underground Injection Control (UIC) program for Class II injection or disposal wells in Montana. The UIC Program, authorized under Section 1425 of the Safe Drinking Water Act, had previously been administered by EPA, and state administration of the program had been sought for several years.

A Class II injection well is one that (1) injects fluids that have been brought to the surface during oil and gas production, (2) is used to inject fluids for the enhanced recovery of oil or gas, or (3) is used to inject fluids for storage of liquid hydrocarbons.

The objective of the UIC program is to protect underground sources of drinking water. To accomplish this, the board may (1) issue, suspend, revoke, modify, or deny permits; (2) regulate the volume and characteristics of the fluids to be injected; (3) impose operational requirements for a well; (4) investigate conditions, access records, inspect equipment and methods, and sample fluids used by operators; and (5) adopt standards for the design, construction, testing, and operation of Class II injection wells.

Operators apply through the public notice and hearing process by notifying the Billings or Helena Oil and Gas Conservation Office. Operators must file specific information about the company and its officers and meet other application requirements.

The board's jurisdiction applies to all but Indian lands. The costs of the program are being covered by a charge of \$200 per injection well per year and an EPA operating grant of approximately \$110,000 per year.

The UIC program regulates 860 injection wells (720 enhanced recovery wells and 140 disposal wells). In 1998, the Board permitted 16 new injection wells (13 enhanced recovery and 3 disposal).

UIC field inspectors performed 634 inspections of 440 injection wells in 1998. (Many wells were inspected more than once during the year.) The inspections include the witnessing of 163 mechanical integrity tests (MITs), 20 plugging jobs, 433 routine injection well inspections, and 18 other inspections.

In 1998, there were 134 UIC violations. Seventy-nine of these were MIT violations (either MIT failure or overdue tests), 49 were for exceeding the maximum permitted injection pressure, and 6 violations were for other reasons.

Activity Review

Montana's oil production was 16.6 million barrels in 1998, a 3.4 percent increase over the previous year. Oil production is shown by region in Figure 14, while Table 17 presents information about oil production over the last five years. Crude oil production since 1954 is illustrated in Figure 15.

Figure 14. Oil Production by Region in 1998
16,612,937 Barrels

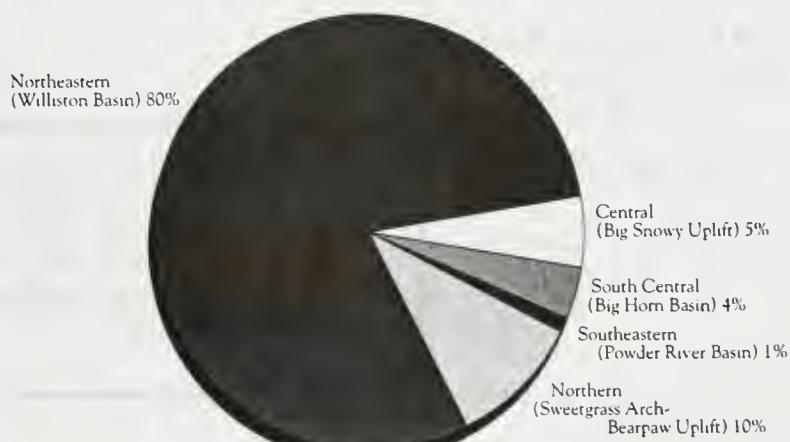


Table 17
Five-Year Summary of Oil Production in Montana

	1994	1995	1996	1997	1998
OIL PRODUCTION IN BARRELS					
Northern Montana	2,003,272	1,783,331	1,735,895	1,677,301	1,582,032
South Central	733,965	698,537	653,723	606,858	583,112
Central	955,703	1,040,127	950,865	967,478	815,762
Northeastern.....	12,747,075	12,877,305	12,695,462	12,637,980	13,396,334
Southeastern	90,965	126,524	115,662	179,406	235,697
TOTAL	<u>16,530,980</u>	<u>16,525,824</u>	<u>16,151,607</u>	<u>16,069,023</u>	<u>16,612,937</u>
NUMBER OF PRODUCING OIL WELLS					
Northern Montana	2,324	2,093	2,029	1,971	1,884
South Central	136	132	130	130	131
Central	272	249	239	231	230
Northeastern.....	1,311	1,310	1,294	1,301	1,330
Southeastern	71	28	46	73	82
TOTAL	<u>4,114</u>	<u>3,812</u>	<u>3,738</u>	<u>3,706</u>	<u>3,657</u>

Figure 15
Crude Oil Production in Montana
(Million Barrels per Year)
1954-1998

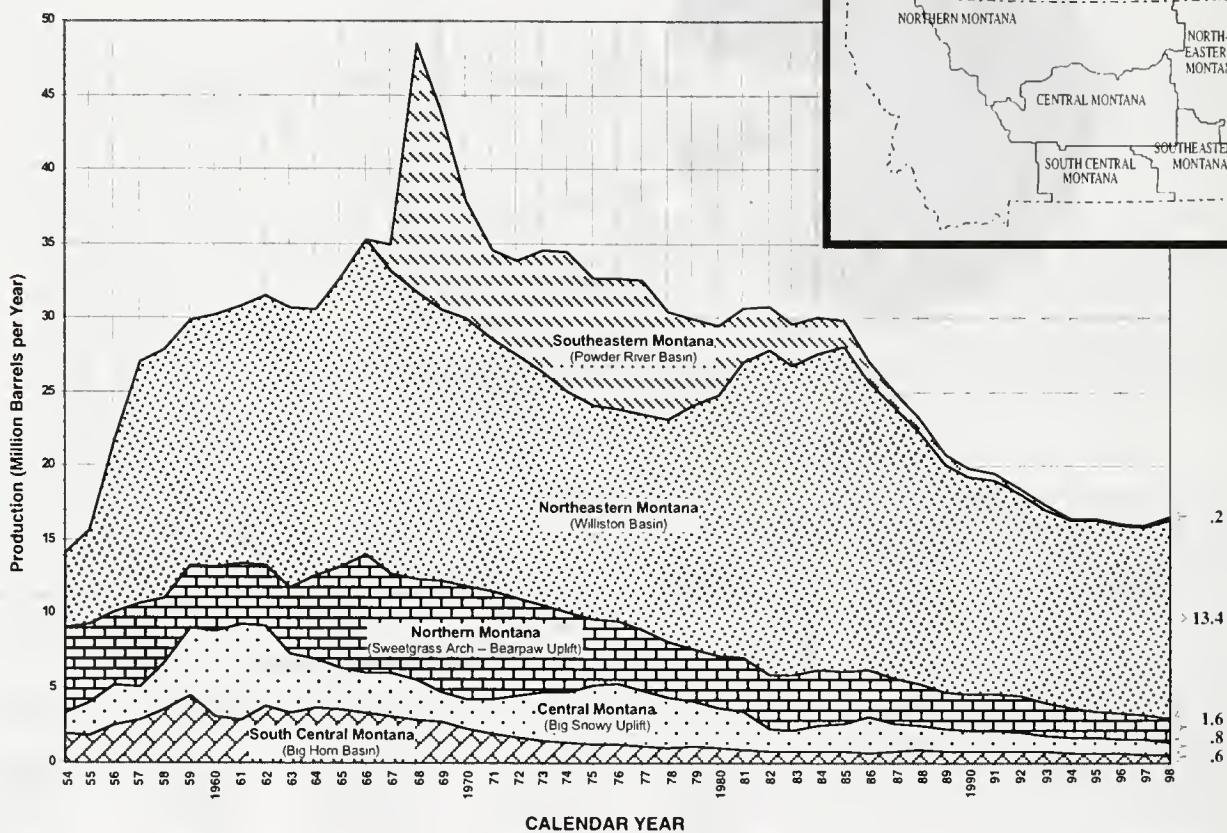
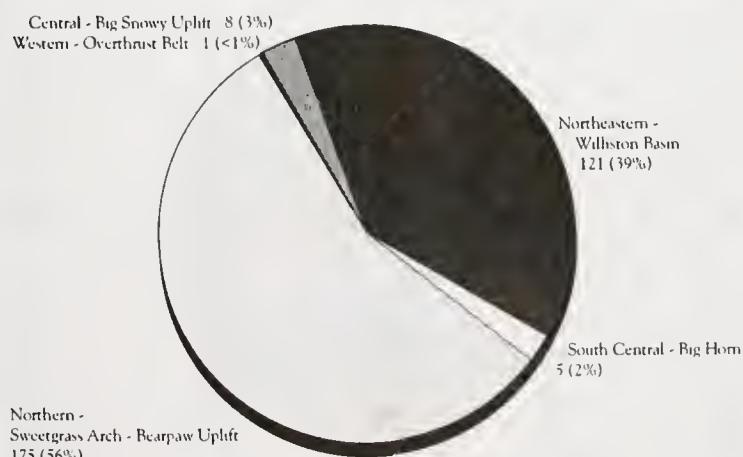


Table 18
Summary of 1998 Oil and Gas Activities

OIL	Barrels
Oil Produced	16,612,937
Oil Imported From:	
Canada	39,449,284
Wyoming	13,067,038
TOTAL	<u>52,516,322</u>
Oil Exported	13,600,000
GAS	MCF
Gas Withdrawals:	
Natural	52,076,991
Associated	7,676,435
TOTAL	<u>59,753,426</u>
Gas Imported From:	
Canada	16,124,184
North Dakota	10,304,038
Wyoming	6,105,598
TOTAL	<u>32,533,820</u>
Gas Exported To:	
North Dakota	12,709,188
South Dakota	4,907,765
Midwest	20,425,225
TOTAL	<u>38,042,178</u>

Figure 16
Wells Completed in 1998 by Region
(310 Wells)



Well drilling decreased from 371 wells drilled in 1997 to 310 in 1998. Figure 16 shows the wells completed by region, while Table 19 presents the well information by county. There were 165 new gas wells and 79 new oil wells completed during 1998. Table 20 details well-drilling activity from 1994 through 1998.

Table 19
Summary of 1998 Well Drilling by County

COUNTY	DEVELOPMENT			EXPLORATORY			SERVICE WELLS	TEMP. ABAND.	TOTAL WELLS
	OIL	GAS	DRY	OIL	GAS	DRY			
Big Horn	0	0	2	0	0	0	0	0	2
Blaine	0	26	6	4	11	4	0	0	51
Carbon	0	0	1	0	0	0	0	0	1
Chouteau	0	0	0	0	1	0	0	0	1
Daniels	0	0	0	1	0	1	0	0	2
Dawson	1	0	0	2	0	2	0	0	5
Fallon	30	31	0	6	0	0	0	1	68
Garfield	0	0	0	0	0	2	0	0	2
Glacier	1	5	0	0	0	2	0	0	8
Hill	0	26	10	1	9	3	0	0	49
Lewis and Clark	0	0	0	0	0	1	0	0	1
Liberty	0	1	0	0	0	0	0	0	1
McCone	0	0	0	0	0	4	0	0	4
Meagher	0	0	0	0	0	1	0	0	1
Musselshell	0	0	0	0	0	1	0	0	1
Petroleum	0	0	0	0	0	1	0	0	1
Phillips	0	29	1	0	3	0	0	0	33
Pondera	0	0	1	0	0	0	0	0	1
Richland	2	0	0	8	0	3	1	1	15
Roosevelt	1	0	0	4	0	4	1	0	10
Rosebud	0	0	0	2	0	0	0	0	2
Sheridan	5	0	0	5	0	4	0	1	15
Toole	4	22	2	1	1	1	0	0	31
Wheatland	0	0	0	0	0	1	0	0	1
Wibaux	0	0	0	1	0	1	0	0	2
Yellowstone	0	0	0	0	0	2	0	0	2
TOTALS	44	140	23	35	25	38	2	3	310

Table 20
Five-Year Summary of Wells Drilled

DEVELOPMENT WELLS DRILLED	1994	1995	1996	1997	1998
Oil Wells.....	34	53	68	59	44
Gas Wells.....	78	65	54	194	140
Dry Holes.....	29	14	15	33	23
Service Wells.....	5	10	4	4	2
TOTAL	146	142	141	290	209
EXPLORATORY WELLS DRILLED					
Oil Wells.....	23	7	13	31	35
Gas Wells.....	12	15	10	7	25
Dry Holes.....	45	44	40	41	38
Temporary Abandoned.....	6	3	5	2	3
TOTAL	86	69	68	81	101
TOTAL WELLS DRILLED	<u>232</u>	<u>211</u>	<u>209</u>	<u>371</u>	<u>310</u>

Geophysical activities continued in 1998 with seven contractors completing 29 seismic projects. The Williston Basin in northeastern Montana had most of the seismic activity. A significant number of the permitted seismic projects involved 3-D techniques.

The number of horizontal wells permitted in 1998 decreased, with 55 new horizontal wells and 3 horizontal recompletions of existing vertical wells. The Board of Oil and Gas Conservation approved one new tertiary enhanced recovery project, thereby qualifying the incremental increase in production for a lower tax rate. Thirty-one horizontal recompletion efforts were certified for tax purposes.

The board's staff issued 551 permits to drill during the year, which is a 14 percent increase over the number issued in 1997. An environmental assessment was performed for each application involving private or state-owned lands prior to permit issuance.

BOGC issued 107 orders during 1998. Most of these orders authorized increased well density to accommodate in-fill drilling programs, established permanent spacing for horizontal wells and exception wells, delineated new fields, and allowed exceptions to existing field rules.

BOGC plugged and restored orphaned and abandoned wells. In 1998, the board spent \$598,288 on plugging and restoration projects: \$225,050 on the Devils Basin project in Richland, Roosevelt, and Musselshell Counties; \$358,348 on the Balco project in Richland County; and \$14,890 on project oversight. Funds to support these projects came from the oil and gas production damage mitigation account and grant awards from DNRC's reclamation and development grants program.

A World Wide Web page with public hearing notices, weekly activity reports, a staff directory, rules and regulations, and other information about board programs is available on the Internet at:

<http://www.dnrc.state.mt.us/oilgas/>

RESERVED WATER RIGHTS COMPACT COMMISSION



RESERVED WATER RIGHTS COMPACT COMMISSION

Working to "conclude compacts for the equitable division and apportionment of waters between the State and its people and the several Indian Tribes claiming reserved water rights within the state" (MCA 85-2-701) and "between the State and its people and the federal government claiming non-Indian reserved waters within the state" (MCA 85-2-703).

The Montana Legislature created the Reserved Water Rights Compact Commission (RWRCC) in 1979, the same year that it created the Montana Water Court. The purpose of the commission is to negotiate, on behalf of the State of Montana, with Indian Tribes and federal agencies claiming federal reserved water rights in the state. While they are being negotiated, the claims of the Tribes and federal agencies are suspended from adjudication in the Water Court. After being submitted for public comment in the specific area impacted, a negotiated settlement must be ratified by the Montana Legislature and the Tribal Council (in the case of Indian reserved rights) and approved by the appropriate federal authorities.

Montana was one of the first states to conduct such negotiations, and it is still the only state to do so using a commission. The RWRCC is supported by an 12-member staff.

The Compact Commission

The Reserved Water Rights Compact Commission is made up of nine members who serve for four-year terms. One member is appointed by the Attorney General's Office, four by the Governor's Office, two by the Speaker of the House, and two by the President of the Senate. Current RWRCC members are:

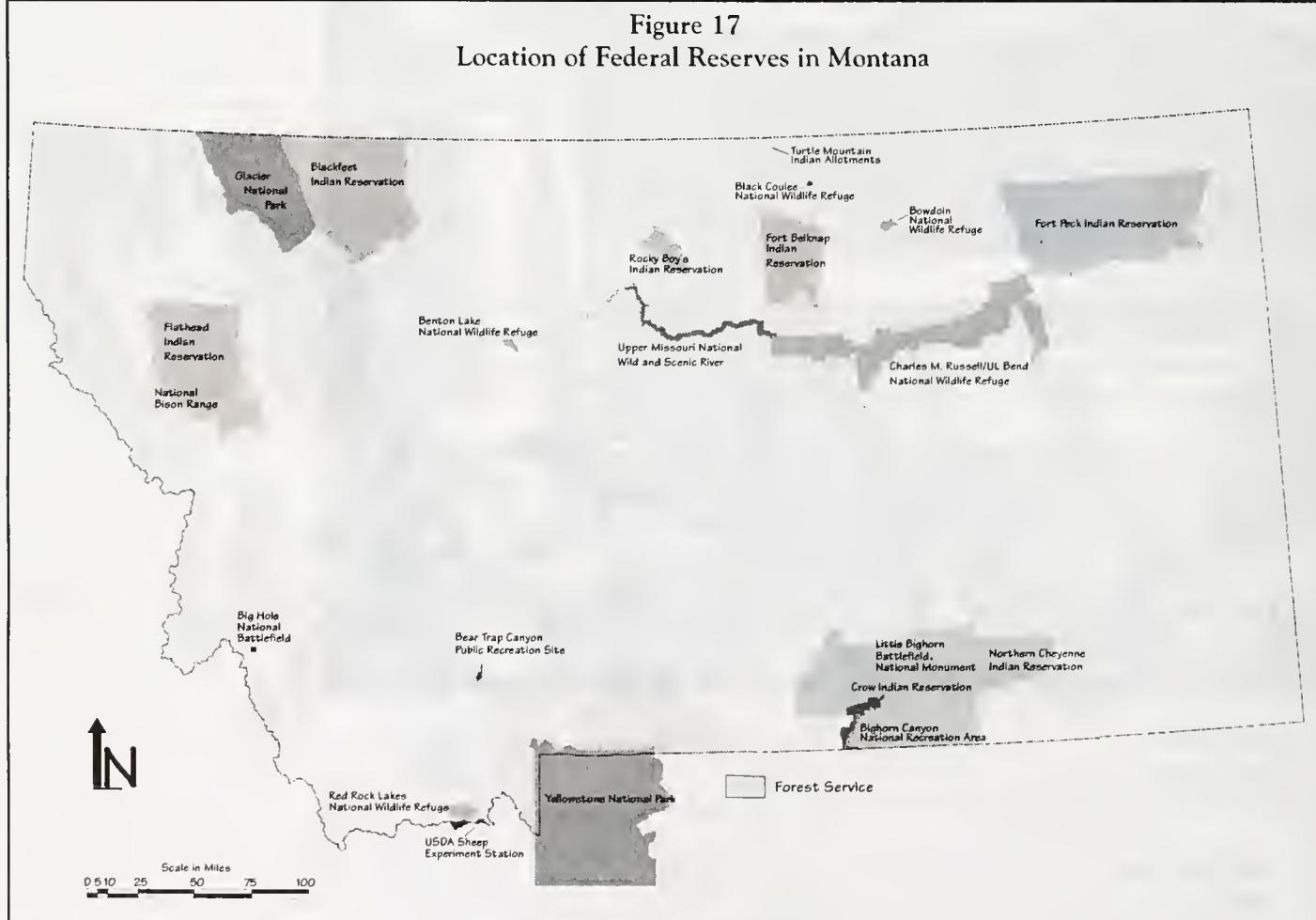
Chris Tweeten, Chairman
Helena
Deputy Attorney General
Bob Thoft, Vice Chairman
Stevensville
Rancher
Tara DePuy
Livingston
Park County Attorney
Gene Etchart
Glasgow
Rancher
Jack Salmond
Choteau
Rancher/Outfitter
Rep. Antoinette "Toni" Hagener
Havre
Retired Teacher
Rep. John "Sam" Rose
Choteau
Rancher/Retired Teacher
Sen. Chuck Swysgood
Dillon
Trucking
Sen. Bea McCarthy
Anaconda
Teacher

Federal Reserved Water Rights

A federal reserved water right is a right to water that was created when Congress or the President of the United States reserved land out of the public domain. Federal reserves in Montana are shown in Figure 17. The U. S. Supreme Court has ruled that enough water be reserved to meet the purposes for which the reserved lands were designated.

The date that the land was withdrawn and the reservation created is the priority date of a federal reserved water right. Reserved water rights for Indian reservations, for instance, go back to the 1800s. Federal reserved water rights do not have the same restrictions placed on them as on state appropriative rights. For example, a notice of appropriation or a beneficial use is not required to maintain a federal reserved right, and it is not lost due to non-use.

Figure 17
Location of Federal Reserves in Montana



Completed Compacts

The commission has completed the nine compacts listed in Table 21.

Table 21
Compacts Concluded by the
Reserved Water Rights Compact Commission

Fort Peck - Assiniboine and Sioux Tribes MCA 85-20-201	May 1985	This compact contains a provision for water marketing by the Tribes, making federal legislation necessary. That federal legislation has not yet passed. This compact is currently under consideration by the Water Court.
Northern Cheyenne Tribe MCA 85-20-301	September 1992	Included in the compact is a requirement that the federal government and the State of Montana contribute funds to repair and enlarge the unsafe Tongue River Dam. Planning and oversight of dam construction were handled by the DNRC Water Resources Division. This compact has been approved by the Water Court.
U.S. National Park Service Yellowstone National Park Glacier National Park Big Hole National Battlefield MCA 85-20-401	January 1994	This compact includes an article providing a controlled groundwater area to protect the hydrothermal system in Yellowstone National Park. It is now in the Water Court approval process.
U.S. National Park Service Little Bighorn Battlefield National Monument Bighorn Canyon National Recreation Area MCA 85-20-401	May 1995	Codified with the first compact with the National Park Service (above), this compact has been filed with the Water Court.
U.S. Bureau of Land Management (BLM) Wild and Scenic Missouri River Bear Trap Canyon, Madison River MCA 85-20-501	March 1997	This compact settles the instream flow rights for two river segments. It has received final approval from BLM management and the U.S. Department of Justice. It will be submitted to the Montana Water Court.
U.S. Fish and Wildlife Service (FWS) Benton Lake National Wildlife Refuge Black Coulee National Wildlife Refuge MCA 85-20-701	March 1997	This compact settles the reserved water rights for two of the six national wildlife refuges. It has been approved by FWS and the U.S. Department of Justice. The compact will be submitted to the Montana Water Court.
Chippewa Cree Tribe of the Rocky Boy's Indian Reservation MCA 85-20-601	April 1997	This compact allocates 10,000 acre-feet per year (AFY) to the Tribe from water arising on the reservation and includes an agreement to seek 10,000 AFY from water stored in Tiber Reservoir. The compact also includes an agreement to seek federal authorization for a drinking water system for Rocky Boy's Reservation. The compact was approved by the Chippewa Cree Tribal Council, passed by the legislature, and signed by the governor. The Tribe, the U.S. Departments of Justice and the Interior, and the State of Montana submitted the compact to Congress early in 1998 and (when the bill did not make it through the Congressional process in 1998) again in the spring of 1999. The parties attended congressional hearings in Washington, D.C., in June 1999.

Continued on page 66

Table 21
Compacts Concluded by the
Reserved Water Rights Compact Commission
(Continued from page 65)

Compact	Date	Comments
U.S. Fish and Wildlife Service (FWS) Red Rock Lakes National Wildlife Refuge MCA 85-20-801	April 1999	This compact settles the reserved water rights for another of the six national wildlife refuges for which federal reserved rights are claimed in Montana. The Red Rock Lakes settlement has been ratified by the legislature and is awaiting final approval from the federal agencies. The compact does not have to be approved by Congress.
Crow Tribe MCA 85-20-901	June 1999 Special Legislative Session	This compact allocates 500,000 acre-feet per year (AFY) of the natural flow of the Bighorn River to the Crow Tribe for existing and future uses. In addition, the U. S. Bureau of Reclamation will allocate 300,000 AFY of storage in Bighorn Lake to the Tribe. On the area north of the reservation known as the "Ceded Strip," the Tribe has the right to use 47,000 AFY from any water source on lands or interests that Congress restored to the Tribe or on any lands acquired and held in trust for the Tribe. The compact provides protection for all current state and Tribal water users in the affected water basins from the Tribe's future exercise of its water rights and requires closing some basins to new appropriations of water. The compact also creates an administrative process for dispute resolution. In addition, the compact authorizes the State to pay the Crow Tribe \$15 million in exchange for the Tribe's dismissal of a coal severance tax lawsuit and for the State's portion of the cost-share for the water rights settlement.

Crow Tribe of the Crow Reservation

In the fall of 1998, Crow Tribal officials approached Governor Marc Racicot and Attorney General Joe Mazurek with a proposal for settlement of Tribal federal reserved water rights, coal severance tax litigation which had gone on between the state and the Tribe for years, and "Section 2" land ownership on the Crow Reservation. (Section 2 of the 1920 Crow Allotment Act placed restrictions on the size of parcels purchased on the reservation by non-Tribal entities.) The Crow Tribe hoped that a settlement package could be brought to the 1999 Legislature for approval.

From December 1998 until the end of the 1999 legislative session, the commission, the Crow Tribe, and the United States Negotiating Team worked to come to an agreement on the water rights issues. The Tribe and the commission finalized a compact in April providing for a significant water right for the Tribe while protecting the rights of all existing water rights holders in the affected water basins. At the same time, Governor Racicot and Attorney General Mazurek negotiated a final settlement of the coal tax litigation. Because additional time was needed for public comment, the agreement could not be presented to the regular session of the 1999 legislature, which ended in April.

Following a public comment period, two bills addressing the issues were ratified by the Montana Legislature in a June 1999 special session. The agreements must now go to Congress for approval and must pass a Crow Tribal referendum vote. The "Section 2" issue will be negotiated by the Tribe and the United States and will be included in the Congressional package. During the next year, the commission, the Tribe, and the United States will continue negotiating a "Streamflow and Lake Level Management Plan for Bighorn River and Lake" that is required by the compact.

Current Negotiations

Commission members and staff have been concentrating on negotiations concerning two Indian reservations and two federal agencies.

Indian

Gros Ventre and Assiniboine Tribes of the Fort Belknap Reservation

Formal negotiations have proceeded since 1996, when the Tribes proposed an approach to settlement. Commission, Tribal, and federal staff evaluated the impact of the proposal on irrigation in the Milk River basin. The Tribes, the United States, and the commission have met approximately every three months since May 1998 to discuss ways to mitigate the impact of the Tribal proposal and methods to coordinate administration and enforcement efforts in the basin. The parties hope to finalize negotiations in time for the 2001 legislative session.

Blackfeet Tribe of the Blackfeet Reservation

In the early 1990s, the Blackfeet Tribe chose to litigate rather than negotiate. In November 1997, the Tribal chair informed the commission that the Tribe proposed to resume negotiations and presented a proposal for settlement. A six-month stay of litigation was requested and was entered by the Water Court in December of 1997. In January 1998, one initial negotiating session was held in Great Falls to discuss whether negotiations should resume and, if so, how the parties should proceed. In February, the commission accepted the Tribe's request to resume negotiations, and a negotiating session was held in Helena in December 1998. Since then, staff meetings have been held to exchange technical information that will allow the State of Montana and the United States to evaluate the Tribe's proposal.

Federal

U.S. Department of the Interior, Fish and Wildlife Service

National Wildlife Refuges

The U.S. Fish and Wildlife Service (FWS) claims federal reserved water rights for six national wildlife refuges in Montana. A compact for Benton Lake National Wildlife Refuge and Black Coulee National Wildlife Refuge passed the 1997 legislature and was signed by the governor. It was approved by the federal parties in July 1997 and is in the process of being filed with the Water Court. A settlement agreement for Red Rock Lakes was ratified by the 1999 Montana Legislature and has gone to the appropriate federal agencies for approval.

Negotiations with FWS on the three remaining units (listed below) are continuing.

- Bowdoin National Wildlife Refuge
- Charles M. Russell/UL Bend National Wildlife Refuge
- The National Bison Range

U.S. Department of Agriculture, Forest Service**National Forests**

Technical work is continuing under Phase III of the Memorandum of Understanding between the commission and the U.S. Forest Service (USFS). USFS has identified 750 streams where it desires to protect natural flows, and the commission staff is evaluating the potential impact on existing water rights. Potential future water requirements are being identified. Staff have attended regular meetings of several local watershed coordination groups in an effort to notify the public about the negotiations. The commission has asked the Forest Service to identify all situations where it believes it has the power, under its land use authority, to stipulate bypass flows or an amount of instream flow that water users will be required to leave in the stream on national forest lands. Commission staff will continue to track activities in Idaho, Wyoming, and Colorado regarding USFS federal reserved water rights.

Agricultural and Sheep Experiment Stations

Negotiators have not begun to discuss the reserved rights of the Agricultural and Sheep Experiment Stations at this point.

Preliminary Discussions

Beginning in 1995, the commission has had some preliminary discussions with the Confederated Salish and Kootenai Tribes of the Flathead Reservation regarding future negotiations. In 1998, the parties finalized a Memorandum of Understanding governing negotiating procedures.

Other Reserved Rights

The Turtle Mountain Band of Chippewa owns numerous small allotments scattered throughout Montana. At this time, no negotiations or technical work have been started with the Turtle Mountain Band of Chippewa for settlement of its federal reserved water rights in Montana.

TRUST LAND MANAGEMENT DIVISION



TRUST LAND MANAGEMENT DIVISION

Manage the State of Montana's trust land resources to produce revenues for the trust beneficiaries while considering environmental factors and protecting the future income-generating capacity of the land.

Overview

History

By the Enabling Act approved February 22, 1889, the Congress of the United States granted to the State of Montana, for common school support, sections sixteen and thirty-six in every township within the state. Some of these sections had been homesteaded, some were within the boundaries of Indian reservations, and yet others had been otherwise disposed of before passage of the Enabling Act. To make up for this loss, and in lieu thereof, other lands were selected by the State of Montana.

The Enabling Act and subsequent acts also granted acreage for other educational and state institutions, in addition to the common schools. The original common school grant was for 5,188,000 acres. The additional acreage provided for other endowed institutions included 668,720 acres, for a total of 5,856,720 acres. The total acreage figure (see Figure 18) fluctuates through the years due to land sales and acquisitions. Mineral acreage now exceeds surface acreage because the mineral estate has been retained when lands are sold. Surface acreage at the end of FY 1999 totals over 5.1 million acres; mineral acreage exceeds 6.3 million acres.

The Permanent Fund

The Enabling Act provided that proceeds from the sale and permanent disposition of any of the trust lands, or part thereof, shall constitute permanent funds for the support and maintenance of the public schools and the various state institutions for which the lands had been granted. The Montana Constitution provides that these permanent funds shall forever remain inviolate, guaranteed by the State of Montana against loss or diversion. These funds are often referred to as "nondistributable." The permanent trust balance is shown in Figure 19; Table 22 shows nondistributable receipts for trust revenue for FY 1999 and the current balance of each permanent trust fund.

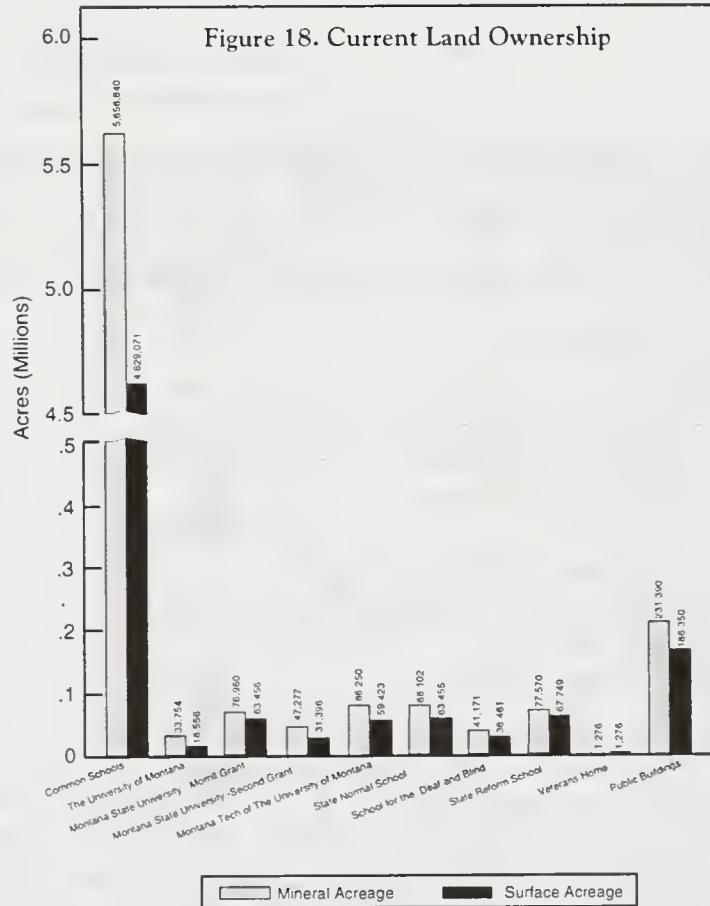
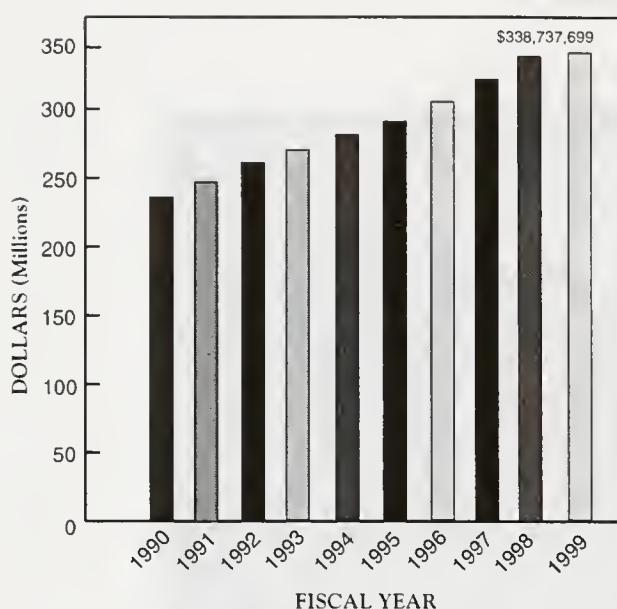


Figure 19. Permanent Fund Balance



Interest and Income

The Enabling Act further provided that rentals received on leased lands, interest earned on the permanent funds arising from these lands, interest earned on deferred payments on lands sold, and all other actual income shall be available for the maintenance and support of such schools and institutions. These funds are referred to as "distributable"; receipts for FY 1999 trust revenue are detailed in Table 22.

Table 22
Revenue Generated for the Trusts
and Permanent Fund Balances in Fiscal Year 1999

Trust	Distributable Revenue	Permanent Fund (Nondistributable Revenue)	
	1999 Revenue	1999 Revenue	Current Balance
Common Schools	\$41,225,671	\$7,141,329	\$316,377,635
Other Trusts			
The University of Montana	\$188,822	\$1,425	\$1,433,917
Montana State University - Morrill Grant	\$308,433	\$319,197	\$2,842,631
Montana State University - Second Grant	\$667,166	\$300,316	\$5,696,497
Montana Tech of The University of Montana	\$542,389	\$5,766	\$3,101,921
State Normal School	\$518,656	\$289,237	\$5,283,736
School for the Deaf and Blind	\$223,010	\$141,600	\$2,010,549
State Reform School (Pine Hills)	\$287,505	\$32,135	\$1,973,891
Veterans Home	\$9,003	\$0	\$16,922
Public Buildings	\$492,981	NA	NA

Distribution of Revenues

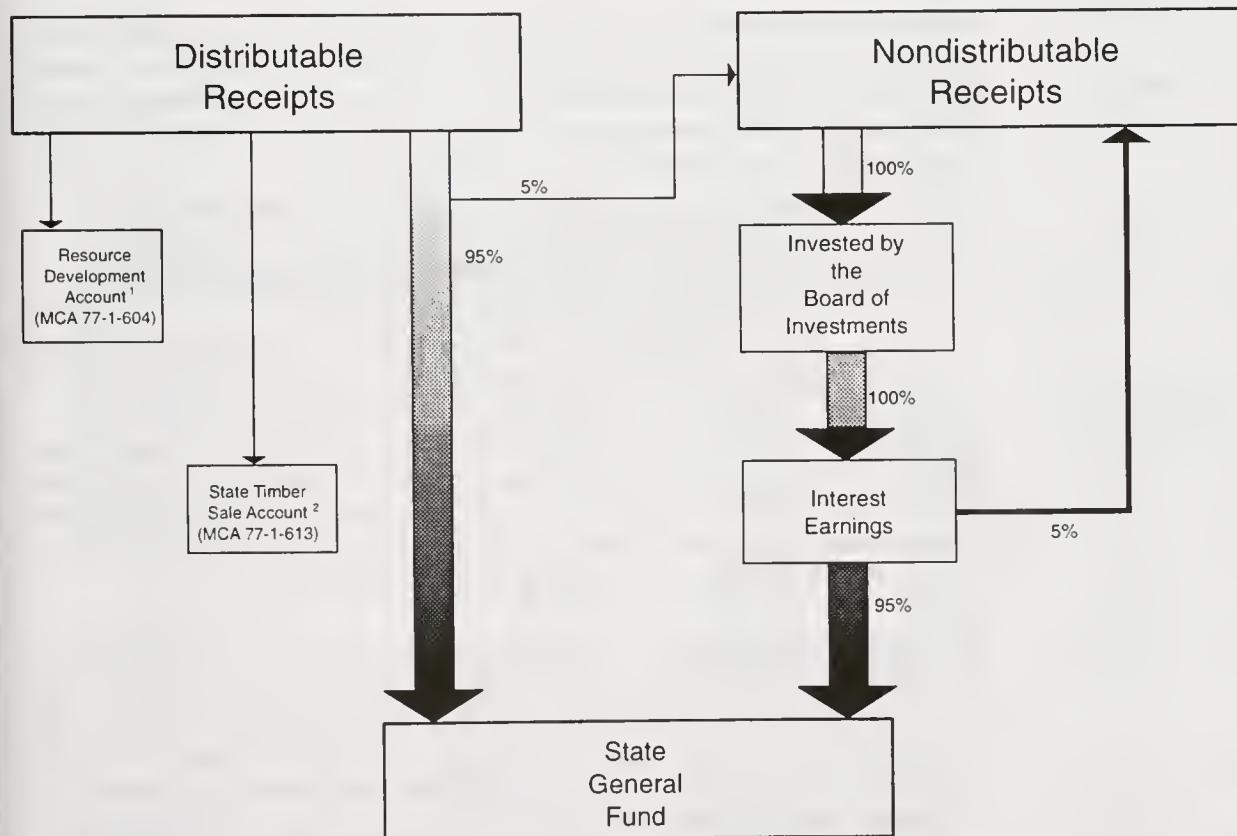
Each section of state trust land is assigned to a specific trust. Distribution of revenues is handled in three different ways, as explained in the following subsections, depending on the section of trust land that generated the revenue.

The Trust Land Management Division also administers land for some other state agencies, in addition to state trust land. Revenue generated from that land is transferred directly to the state agency.

Common School Trust

The distribution of revenues generated from common school trust land is illustrated in Figure 20. From the distributable receipts, a small percentage is used to fund the Resource Development Account and the State Timber Sale Account. Ninety-five percent of the remaining distributable revenues is distributed yearly to the state general fund for use by the public schools of the state. The other 5 percent, together with nondistributable revenues, comprise the permanent fund. The interest earned on the permanent fund is also distributed to the general fund for use by the public schools, with the exception of 5 percent, which is returned to the permanent fund for reinvestment.

Figure 20. Distribution of Revenues for the Common School Trust



1. The Resource Development Account is limited to a small percentage of distributable receipts excluding timber sale income. The purpose of the account is to invest in improving and developing state trust lands in order to increase the income-producing capacity of the lands.

2. The State Timber Sale Account, comprised of timber sales revenue, contains that amount appropriated by the legislature each year to be used specifically for timber sale preparation and documentation. The amount appropriated in FY 1999 was \$1,318,405.

Trusts Other Than the Common School Trust

Distribution of revenues to the other trusts is similar. A small percentage goes to the Resource Development Account, but no funds go to the State Timber Sale Account. All of the remaining distributable receipts go directly to the trust recipient. Included in "other" trusts are:

- The University of Montana
- Montana State University - Morrill Grant
- Montana State University - Second Grant
- Montana Tech of The University of Montana
- State Normal School (Montana State University-Billings and Western Montana College of The University of Montana)
- School for the Deaf and Blind
- State Reform School (Pine Hills)
- Veterans Home

Public Buildings

Revenue received on public buildings trust land is all distributed to the Department of Administration. There is no permanent fund for the public buildings trust.

Purpose

The purpose of the Trust Land Management Division is to administer and manage the state trust timber, surface, and mineral resources for the benefit of the common schools and the other endowed institutions in Montana, under the direction of the State Board of Land Commissioners. The board, which is often called the "State Land Board," consists of Montana's top elected officials:

- Marc Racicot, Governor
- Nancy Keenan, Superintendent of Public Instruction
- Mike Cooney, Secretary of State
- Joe Mazurek, Attorney General
- Mark O'Keefe, State Auditor

The division is divided into four primary programs: agriculture and grazing management, forest management, minerals management, and special use management. Program administration, direction, oversight, and support are provided by staff and program specialists located in Helena and Missoula. On-the-ground management is provided by field personnel located throughout the state.

The department's obligation is to obtain the greatest benefit for the school trusts. The greatest monetary return must be weighed against the long-term productivity of the land to ensure continued future returns to the trusts. Total revenues generated by the Trust Land Management Division over the last five years are listed by activity in Table 23. This table contains not only trust revenues, but also those revenues collected for other state entities, revenues appropriated to fund a portion of the division's programs, and other miscellaneous revenues collected by the division.

The Trust Land Management Division distributed over \$44 million in earnings and interest directly to the public schools and other entities in FY 1999. In the

public school system, this equated to \$260 per student. In addition, the program invested over \$8.2 million into permanent funds in FY 1999, increasing the balance to \$338,737,699.

Table 23
Five-Year Summary of
Revenue Generated (by Activity)

Activity	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999
Agriculture and Grazing Management					
Grazing leases	\$4,726,597	\$4,385,636	\$3,747,968	\$4,113,142	\$4,608,145
Agricultural leases	8,108,128	10,087,192	10,046,553	9,318,295	8,644,162
Total	\$12,834,725	\$14,472,828	\$13,794,521	\$13,431,437	\$13,252,307
Forest Management					
Timber sales	\$4,658,002	\$4,301,854	\$5,761,809	\$6,259,332	\$5,905,196
Minerals Management					
Oil and gas revenues					
Rentals/bonuses/penalties	\$2,131,337	\$4,221,441	\$1,971,545	\$2,400,550	\$2,083,626
Royalties	2,887,004	2,849,622	3,618,924	2,810,151	2,200,764
Seismic exploration	16,480	25,655	41,705	29,378	13,825
Aggregate minerals					
Rentals	50	100	100	100	250
Royalties	178,985	118,458	217,660	208,845	213,185
Coal					
Rentals/bonuses	50,189	68,247	38,899	46,290	44,371
Royalties	3,462,707	3,529,980	6,255,318	2,759,073	2,312,533
Other minerals					
Rentals/penalties	65,224	68,081	86,804	73,081	49,412
Royalties	147,717	41,217	24,277	23,006	8,439
Minerals Management Total	\$8,939,693	\$10,922,801	\$12,255,232	\$8,350,474	\$6,926,405
Special Use Management					
Rights-of-way	\$253,458	\$269,642	\$1,484,511	\$141,989	\$157,231
Cabin and homesite leases	382,287	426,560	482,584	553,095	616,757
Land sales	0	0	323,135	18,844	254,917
Other leases and licenses	193,216	250,691	321,366	293,331	266,198
Recreational use					
General licenses	166,735	216,505	306,755	340,107	348,298
Special licenses	67,247	57,118	109,376	65,621	86,165
Commercial	112,184	123,410	115,988	125,030	146,015
Total	\$1,175,127	\$1,343,926	\$3,143,715	\$1,538,017	\$1,875,581
Other					
Trust and legacy interest	\$21,756,639	\$29,952,079	\$23,608,293	\$25,820,410	\$26,024,064
Other revenues	\$2,280,187	\$1,871,234	\$2,113,233	\$867,351	770,200
Total	\$24,036,826	\$31,823,313	\$25,721,526	\$26,687,761	\$26,794,264
TOTAL	\$51,644,373	\$62,864,722	\$60,676,803	\$56,267,021	\$54,753,753

NOTE: The differences between this summary and previous years' summaries result from a change in accounting methods. DNRC believes that this summary best represents revenues generated by the Trust Land Management Division.

Agriculture and Grazing Management

The Agriculture and Grazing Management Bureau supervises the management and leasing of approximately 10,000 agreements for crop and rangeland uses on 4.9 million acres of school trust lands throughout the state. These duties are accomplished by administrative staff and specialists located in the department's Helena office and by staff located in field offices statewide.

Surface Leasing

The surface leasing program is responsible for the administrative functions associated with maintaining surface lease agreements. Each year, responsibilities include processing approximately 1,000 lease renewals; advertising, competitively bidding, and issuing approximately 50 new leases; reviewing and processing assignments, subleases, pasturing agreements, custom farming agreements, pledges, and mortgages; and collecting, verifying, and posting rentals and fees.

Figure 21. Agricultural Rentals

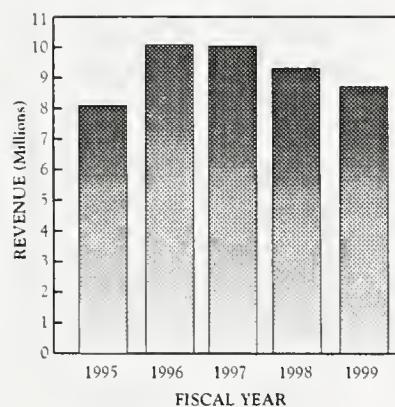
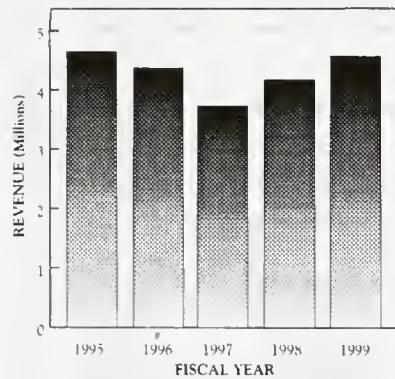


Figure 22. Grazing Rentals



Agricultural Lands

Currently 3,000 agreements include agricultural use of state trust lands. Crops raised on these lands are primarily dryland hay and small grains, but also include irrigated grain crops, corn, sugar beets, potatoes, canola, safflower, alfalfa seed, and native grass seed.

In FY 1999, revenues totaling \$8,644,162 were received from agricultural leasing (see Figure 21). The majority of the leases are on a crop-share basis with the minimum share of 25 percent set by statute. In addition to receiving rental payments from lessees, the state participates in and receives farm program payments from the U. S. Department of Agriculture (USDA) Farm Service Agency, as authorized under the Agricultural Market Transition Act of 1996. For FY 1999, this amount exceeded \$3,500,000 for production flexibility contracts, lands enrolled in the Conservation Reserve Program (CRP), market loss assistance payments, and loan deficiency payments.

Grazing Lands

Approximately 8,500 agreements include grazing use of trust lands. The 4.3 million acres of classified grazing and forest lands have an estimated carrying capacity of 1,085,000 animal unit months (AUMs). The minimum rental rate for grazing leases is set by a formula which includes the average weighted price for beef cattle sold in Montana during the previous year. In FY 1999, grazing leases generated \$4,608,145 (see Figure 22).

Land Management

The land management program manages the agriculture and grazing resources on the lands administered by the bureau. This responsibility includes evaluation and assessment of range and cropland condition; compliance with the Montana Environmental Policy Act (MEPA); administration of archeological, paleontological, and historical properties on state trust land; investigations of lease noncompliance; participation in the Federal Farm Program; and oversight of water developments, water rights, and improvement projects such as range renovations and resource development.

In FY 1999, bureau and field staff continued weed management and control efforts on state-owned lands, including the work completed under "cooperative county weed management plans." Those plans detail how the Trust Land Management Division will coordinate with county weed districts on weed control for state-owned land. Projects include weed awareness campaigns, weed mapping, staff training, herbicide treatments, and bio-control releases. In FY 1999, approximately 1,000,000 flea beetles were collected and redistributed for biological control of leafy spurge weed infestations.

Also in FY 1999, considerable effort was made to take advantage of the loan deficiency payments offered under the Federal Farm Program. These payments are available when commodity prices fall below the loan rate set by the U.S. Department of Agriculture. This work resulted in additional agricultural revenue of more than \$250,000.

Forest Management

The Forest Management Bureau oversees forested, state-owned trust lands to provide income to the various school trusts. Income is derived from the sale of forest products.

The bureau also provides program direction and support to the area land offices. That support is provided in several subprograms or areas of expertise: forest land management, planning, hydrology, soils, economics, wildlife, and fisheries. Support and program direction are offered in several different ways: the development of resource management standards, site-specific review and recommendations for proposed management activities, and participation as members of interdisciplinary teams that develop land management proposals.

The area land offices have primary responsibility for on-the-ground management activities. With assistance from the Forest Management Bureau, they conduct environmental reviews of proposed management activities, prepare contracts for those activities, and complete the necessary field work.

The State Forest Land Management Plan (SFLMP), approved by the State Land Board in June 1996, guides the management of the forested trust lands. This guidance is provided in the form of general management philosophy and specific resource management standards. The strategic guidance provided by SFLMP is summarized in this excerpt:

Our premise is that the best way to produce long-term income for the trust is to manage intensively for healthy and biologically diverse forests. Our understanding is that a diverse forest is a stable forest that will produce the most reliable and highest long-term revenue stream. Healthy and biologically diverse forests would provide for sustained income from both timber and a variety of other uses. They would also help maintain stable trust income in the face of uncertainty regarding future resource values. In the foreseeable future timber management will continue to be our primary source of revenue and primary tool for achieving biodiversity objectives.

Forest Improvement

The forest improvement program uses fees from harvested timber to improve the health and productivity of trust forests. Uses of these fees authorized by statute include disposal of logging slash, reforestation, acquiring access and maintaining roads necessary for timber harvest, other treatments necessary to improve the condition and income potential of state forests, and compliance with other legal requirements associated with timber harvest. Specific activities include piling of logging slash, prescribed burning, site preparation, seed collection, seedling production, tree planting, thinning, genetic tree improvement, erosion control, and culvert replacement.

In FY 1999, the activities listed in Table 24 were undertaken to improve the health and productivity of forested state trust lands.

Table 24
Forest Improvement Activities in FY 1999

Tree planting	540 acres
Tree netting	339 acres
Net maintenance ¹	2,276 acres
Precommercial thinning (contract)	2,066 acres
Precommercial thinning (seasonals)	25 acres
Slashing nonmerchantable	246 acres
Pile burning	1,319 acres
Broadcast burning	385 acres
Brush piling	1,004 acres
Fireline construction	14,784 feet
Herbicide application	1,509 acres
Road brushing	65 miles
Tree improvement areas managed	12 acres

Net maintenance includes replacing, maintaining, or removing seedling netting. Not included are various road maintenance activities, such as grading, snowplowing, gates, etc.

Forest Product Sales

The forest product sales program incorporates all activities and expenditures required to grow, harvest, and sell forest products from state trust lands efficiently. Activities within this program include field layout of timber sales; development of sale prescriptions; MEPA documentation; preparation of sale contracts, prospectuses, and notices; both field and office administration of timber sales; and sale billing and accounting. These responsibilities are shared among field foresters, area staff, and bureau staff.

The estimated annual sustainable harvest from forested trust lands is 42.164 million board feet. That figure is the department's annual sales target, until the sustained yield study conducted in 1996 is revisited. Review is required at least once every 10 years, according to MCA 77-5-221-223. Actual sales in FY 1999 were 42.8 million board feet (see Figure 23).

During the year, \$5,905,196 in revenue was generated from the harvest of timber (see Figure 24).

Figure 23. Timber Volume Sold

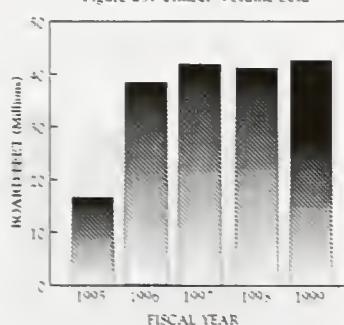
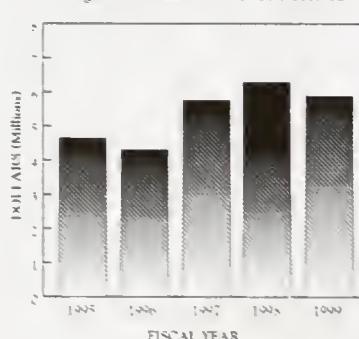


Figure 24. Timber Revenue Received



Also in FY 1999, 22 timber sales and 108 timber permits were prepared for a total of 39.8 million board feet (see Figure 25). All timber sales and permits are developed, analyzed, and reviewed in the field by foresters and resource specialists to ensure that those sales comply with all applicable laws, policies, and management direction. At the end of FY 1999, DNRC had 69 million board feet under contract with an approximate value of \$11 million.

In FY 1999, the Forest Management Bureau and field offices also spent considerable time developing strategies and analytical techniques for implementing the State Forest Land Management Plan. The development of implementation guidance and monitoring procedures, as well as the training of personnel, are ongoing processes.

Inventory

The inventory program is responsible for the collection and analysis of forest resource inventory data in Montana. The program provides a current, comprehensive inventory of the timber resources on 617,000 acres of forested land administered by the Department of Natural Resources and Conservation. Stand-level inventory maps have been drawn and resource data collected for 641,800 forested and nonforested acres of state trust land. The development and maintenance of a geographic information system (GIS) used to support planning for forest management activities and environmental analyses is another responsibility of this program.

In FY 1999, the inventory program added 58,000 acres to the stand-level inventory and updated the existing stand inventory maps and data for 23,000 acres. The GIS provided analysis and maps for 15 forest land management projects and updated existing maps and associated databases. In addition, contractors developed a statewide DNRC ownership map and digital base maps for the Northwestern and Southwestern Land Offices.

Minerals Management

The Minerals Management Bureau is responsible for leasing, permitting, and managing approximately 2,427 oil and gas, metalliferous and non-metalliferous, coal, and sand and gravel agreements on 6.3 million acres of school trust land and more than 100,000 acres of other state-owned land throughout Montana.

General background information on bureau activities is available on the department's website:

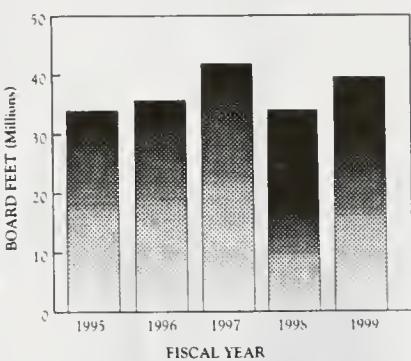
www.dnrc.state.mt.us/trust/mmb.htm

A calendar of key lease sale activities and dates is posted, and lease sale lists and sale results are available for viewing or downloading.

Mineral Leasing

The mineral leasing program is responsible for reviewing and processing all mineral lease and permit applications; advertising, competitively bidding, and issuing new leases; reviewing and approving lease assignments; and collecting, verifying, and posting lease rentals and production royalties.

Figure 25. Timber Volume Prepared for Sale



Revenues received in FY 1999 are listed in Table 25; the relative percentage derived from each mineral type is illustrated in Figure 26.

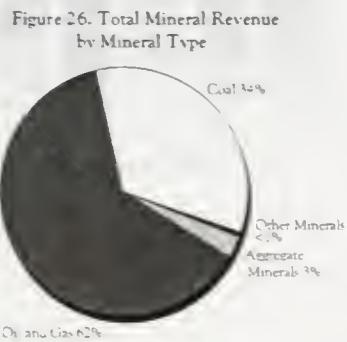


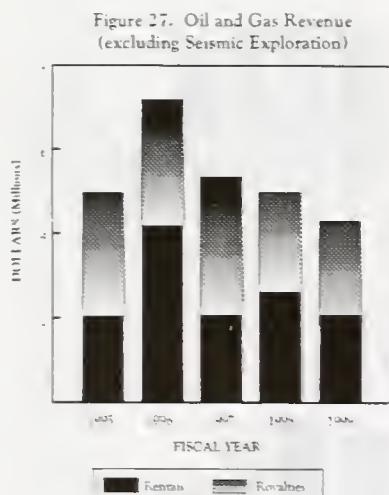
Table 25
Revenues Received from Minerals
in Fiscal Year 1999

Oil and Gas	Rentals/bonuses/penalties	\$2,083,626
	Royalties	2,200,764
	Seismic exploration	13,825
Aggregate Minerals	Rentals	250
	Royalties	213,185
Coal	Rentals/bonuses	44,371
	Royalties	2,312,533
Other Minerals	Rentals/penalties	49,412
	Royalties	8,439
TOTAL		\$6,926,405

Oil and Gas Leasing

The mineral leasing program is responsible for the leasing and monitoring of 2,251 oil and gas leases, 467 of which are currently productive. The number of oil and gas leases managed is down 19.8 percent, compared to FY 1998, while the number of currently producing leases remains virtually unchanged. Activities related to existing leases include collecting, verifying, and posting rental, royalty, delay drilling, and shut-in payments; reviewing and approving assignments and tracking working interest ownership; reviewing and preparing for approval communityization agreements and unit operating agreements; and coordinating with field offices the review and approval of all proposed physical operations on state leases. In addition, four oral auctions of new oil and gas leases are prepared and conducted each year.

In FY 1999, 987,937 barrels of oil were produced; 4,223,814 MCF of gas and 400,397 gallons of condensate were also produced. Revenues received over the last five fiscal years are shown in Figure 27. Oil production declined from 1,107,564 barrels in FY 1998. However, the drop in average price from \$15.06 per barrel in FY 1998 to \$10.50 per barrel in FY 1999 accounted for the majority of the decrease in oil royalty revenue. Gas production increased slightly in FY 1999, and the price remained relatively constant, resulting in a slight increase in royalty revenue.



Other Mineral Leasing

The mineral leasing program also administers a wide variety of leases—including metalliferous and non-metalliferous leases, coal leases, gravel permits, and land use licenses for non-mechanized prospecting—for all other mineral activity on state trust land. Royalties from coal declined in FY 1999. Volume was up slightly, but the average price dropped by \$3.12 per ton to \$12.01. A five-year summary of coal

royalties is shown in Figure 28. Royalties and rentals are also collected for minerals such as bentonite, clay, gold and associated minerals, peat, and shale.

As with oil and gas leasing, the program also reviews and approves all proposed physical activity on the state leases.

The bureau is currently participating with the U.S. Bureau of Land Management in a joint environmental assessment on a proposed coal lease covering both federal and school trust land immediately adjacent to the existing Spring Creek Coal Mine in Big Horn County.

Royalty Auditing and Accounting

The royalty audit program provides additional revenue to the school trusts through programmatic audits. The program serves an important role in identifying royalty under- and over-reporting, rectifying discrepancies, and raising the level of voluntary compliance.

As a result of the audit program, \$88,621 was collected in FY 1999, compared to \$23,663 collected in FY 1998.

Abandoned Well Reclamation

The Board of Oil and Gas Conservation (BOGC) has regulatory and bonding authority on oil and gas wells in Montana, including those wells on state trust lands. BOGC seeks funding from the reclamation and development grants program, administered by DNRC's Conservation and Resource Development Division, to reclaim wells where there is inadequate bonding or no responsible party. The Minerals Management Bureau works with BOGC staff to integrate problem wells on state trust land into BOGC's grant requests.

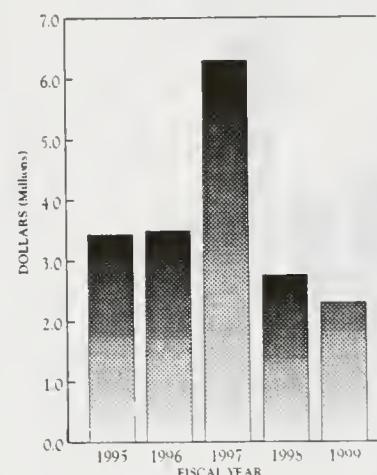
Riverbed Leasing

The Minerals Management Bureau continues its efforts to clarify title to the beds and islands of navigable rivers. Pursuant to statute, the state owns those lands below the low-water mark, islands and their accretions formed in the riverbeds after statehood, and abandoned channels formed by avulsion. Because two navigable rivers in Montana flow through areas with major oil and gas resources, the department has conducted numerous riverbed studies to determine and document state ownership of land. This process allows the state to take a progressive position in issues involving substantial royalties.

In FY 1999, the state received \$107,891 in oil and gas revenues from leased riverbed tracts. Other mineral leasing activity provided \$1,494 from riverbed tracts.

This same ownership review process is also becoming increasingly important in areas where surface development and/or use encounters beds, islands, and abandoned channels of navigable rivers. The department continues to work with state, federal, and private entities whenever ownership issues arise.

Figure 28. Coal Royalties



McDonald Mine Proposal

In November 1994, the Seven-Up Pete Joint Venture (SUPJV) submitted a proposed operating plan for the McDonald Gold Mine near the town of Lincoln in Lewis and Clark County. This proposal included state trust lands and specified an open-pit mine utilizing cyanide heap leaching for mineral recovery. Preparation of a joint environmental impact statement (EIS) then commenced, with the Montana Department of Environmental Quality (DEQ), DNRC, and the U.S. Corps of Engineers serving as the co-lead agencies.

In July 1998, DEQ issued a stop-work order on preparation of the EIS because SUPJV had not paid invoiced amounts due. SUPJV subsequently brought its EIS account current with DEQ, but did not fund any further EIS work. In September 1998, DNRC advised SUPJV that the remaining primary term of the mineral leases had resumed running because no EIS review work was taking place. DNRC further advised that, unless the EIS review process recommenced, the state mineral leases would expire when their remaining primary terms run out (February 2000). In October 1998, SUPJV filed suit against DNRC. SUPJV contends that the remaining primary term is not running and that the mineral leases will not expire in February 2000. In November 1998, a state initiative (I-137) passed that prohibits new open-pit mines that utilize cyanide heap leaching. Thus far, SUPJV has not submitted an operating plan for EIS review that complies with state law, as amended by I-137. In July 1999, mine opponents filed suit against the State Land Board and DNRC, seeking a judicial determination that the mineral leases have already expired. DNRC expects that litigation on both lawsuits will continue in FY 2000.

Special Use Management

The Special Use Management Bureau administers all activities on lands classified as "other" and all secondary activities on lands classified as grazing, agriculture, or timber. Recreational use is considered a special use. The bureau's responsibilities include conducting the real estate functions associated with management of 5.1 million acres, including sales, exchanges, and grants and acquisitions of rights-of-way. The bureau is responsible for the commercial use of state trust lands, including developing new leases and administering existing leases. The bureau coordinates the issuance of land use licenses for shorter-term uses of state trust lands.

The sources of FY 1999 special use revenue are summarized in Table 26, and each is shown as a percentage of the total special use revenue in Figure 29. Income from special uses over the last five years is illustrated in Figure 30.

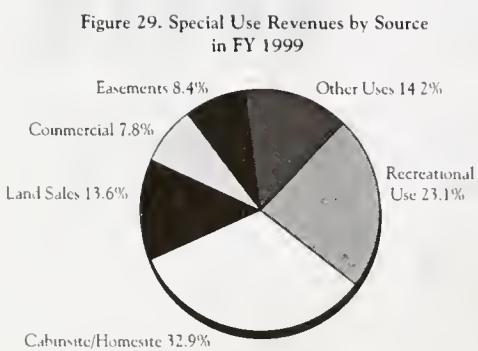


Table 26
Special Use Revenues in Fiscal Year 1999

Cabinsite and homesite leasing (795 agreements)	\$ 616,757
Easements	157,231
Other special use leases and licenses	266,198
Recreational use	434,463
Commercial uses	146,015
Land sales	254,917
TOTAL	\$1,875,581

Leasing/Licensing

Interest in special uses of state trust lands has greatly increased in recent years and is expected to continue into the future. The department issued 9 new leases and 94 new licenses in FY 1999. The special use program is actively developing tracts of land with high potential for commercial leases in Great Falls, Bozeman, and Kalispell. Establishment of new leases and licenses for a multitude of special uses holds great promise for increased revenue to the trusts.

Exchanges

The department reviews and processes land exchanges for the State Land Board under a land exchange policy that was developed a few years ago. Land exchanges are analyzed using the following base criteria:

- Equal or greater land value
- Similar navigable lake or stream values
- Equal or greater income to the school trust
- Equal or greater acreage
- Consolidation of state trust lands
- Potential for long-term appreciation
- Improved or equal access to state or public lands

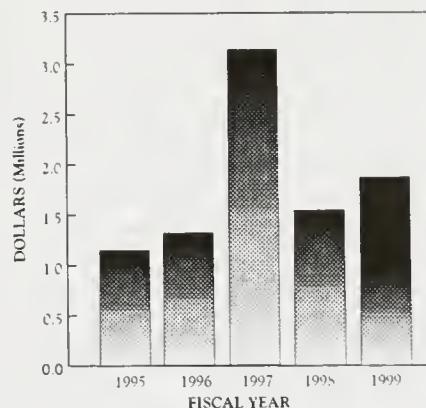
In FY 1999, the bureau received 3 new applications and worked on various phases of review of 12 existing applications. Of these applications, 2 land exchanges that did not meet the criteria outlined in the policy were denied. Three exchanges received preliminary State Land Board approval in FY 1999. Other private and local government proposals are under review.

Crow Tribe Exchange

On November 2, 1994, the Crow Boundary Settlement Act was signed into federal law. The law includes a provision that, as part of the settlement, the Crow Tribe is entitled to the value of 46,625 acres of land originally located within the Crow Reservation as a result of the Crow Allotment Act of 1920. The first priority for returning this value of land to the Tribe is for the Secretary of the U.S. Department of the Interior to negotiate with the State of Montana for the exchange of those remaining state trust lands (approximately 34,000 acres) within the reservation for public domain lands outside the reservation and administered by the U.S. Bureau of Land Management (BLM). Most of the state trust lands involved are currently leased by non-tribal lessees who have expressed concern over the possible change in ownership of these lands.

The land exchange is divided into three phases that involve school trust lands. The first two phases of the exchange were approved by the State Land Board at the June 1999 meeting. These exchanges will transfer 12,455.32 acres to the Crow Tribe in exchange for BLM lands of equivalent value in Beaverhead County and in several counties in southeastern Montana. For the third phase, appraisals and environmental studies are ongoing for the approximately 21,000 acres of state land remaining on the reservation, with presentation before the State Land Board for final approval anticipated for summer or fall of 2000. Approximately 25,000 acres of BLM land in northeastern, central, and southeastern Montana are being analyzed for the third exchange.

Figure 30. Special Use Revenues since FY 1995



Land Sales

The bureau conducted four competitive auctions, which resulted in 29 land sales in FY 1999.

- The department entered into a marketing contract with a Billings area realtor to sell 30 residential lots that were developed in the 1980s. Twenty-six lots sold at auction. Twelve lots closed in FY 1999, bringing in \$191,981 for the trust. Closings for the other 14 lots should take place in early FY 2000. Four lots are still available for sale.
- The bureau sold an existing homesite with additional acres of school trust land totaling approximately 158 acres in Daniels County for \$24,761.
- The bureau sold a 25-acre farmstead area in Cascade County for \$38,175.
- Under the law governing disposition of former institutions (MCA 77-2-302), the bureau sold the abandoned Galen Campus to Anaconda-Deer Lodge County for a nominal sum and the county's assumption of liability associated with the property.

Land Acquisitions

The department worked with the Burlington Northern and Sante Fe Railroad Company to clear up ownership rights on over 1.5 miles of disputed, abandoned railroad corridor on two sections of state trust land in Paradise Valley south of Livingston. The railroad company transferred all rights it may have had to the state in exchange for \$2,500 in administrative fees.

Land Transfers

The 1995 legislature passed MCA 77-2-351, which allows the state to transfer non-trust state land to a local governmental entity in return for a commitment that the property be used for a continuing public purpose. In FY 1999, the bureau transferred a 52-acre parcel to the City of Deer Lodge for public park purposes and the assumption of liability associated with past mining activity. Easement fees were waived for the Cities of Glendive, Whitefish, and Columbia Falls under the authority established by this law. Several additional land transfers under this statute are pending.

Recreational Use

The recreational use program, established by House Bill 778 during the 1991 legislative session, is in its eighth year of development. Legally accessible state trust lands may be used for recreational activities by persons who hold state land recreational use licenses, provided the lands are not closed or restricted for such use by rule or by the department. The type of license required depends on the type of activity conducted. Licenses for "general" recreational use — which, with a few exceptions, includes most forms of noncommercial and nonconcentrated recreational activities — can be purchased from all Montana Department of Fish, Wildlife and Parks (DFWP) license agents and DNRC area offices. "Special" recre-

ational use licenses, which are available only from DNRC area offices, are required for concentrated recreational use conducted by groups or organizations, or for commercial activities such as outfitting. In FY 1999, 35,202 general recreational use licenses were sold, which is a 6.5 percent increase over FY 1998.

Rights-of-Way

The bureau is responsible for reviewing and processing applications for rights-of-way and easements across surface lands and navigable waterways administered by the state. Rights-of-way are most commonly sought for utility lines, pipelines, and roads. Applications for private driveways have been increasing steadily over the past few years. This increase has lead DNRC and the State Land Board to develop a policy establishing criteria for review of these requests. The critical components of this private driveway policy evaluate the impact on the value of state trust land and the ability of state trust land to produce revenue. The policy also establishes a 30-year term for private driveway easements.

In FY 1999, approximately 130 new applications and 11 assignment requests were processed. One hundred and twenty-five applications were presented to the State Land Board. Six emergency construction licenses were issued during the year. Revenue for rights-of-way in FY 1999 totaled \$157,231.

Reciprocal Access

The department is actively pursuing acquisition of access to isolated school trust lands to facilitate forest management and thereby provide increased revenue to the trusts. Eighteen reciprocal access agreements were reached in FY 1999, resulting in permanent easements to 58,739 acres of state trust land. The department granted easements for 26.27 miles of roads on state trust land and acquired 100.14 miles of easements on private and national forest system roads. The 1999 legislature granted the department authority to expand the reciprocal access program to all classifications of state trust lands.

WATER RESOURCES DIVISION



WATER RESOURCES DIVISION

Providing the most benefit, through the best use, of the state's water resources for the people of Montana.

The Montana Constitution affirms that the state's water resources are owned by the State of Montana and are to be used by its people. DNRC has the statutory responsibility to ensure that the state's water resources are managed to meet the existing and future needs of its citizens.

The Water Resources Division (WRD) is comprised of four bureaus — the State Water Projects, Water Management, Water Operations, and Water Rights Bureaus — and eight regional offices. The division employs approximately 115 persons with staff members stationed in Helena's central office and in the regional offices, which are located in Billings, Bozeman, Glasgow, Havre, Helena, Kalispell, Lewistown, and Missoula.

Further information about the division and Montana water resources can be found on the division's web site at:

<http://www.dnrc.mt.gov/wrd/home.htm>

State Water Projects

The State Water Projects Bureau administers the operation, management, and rehabilitation of the state-owned dams, canals, and hydropower projects listed in Table 27, which are owned by DNRC, and Table 28, which are owned by the Department of Fish, Wildlife and Parks (DFWP). Local water users' associations that market the water for irrigation and other purposes operate most of the projects. Debt repayment is derived from repayment contracts with water users and from leases of lands associated with the projects (see Table 29). The bureau ensures that the projects are operated and maintained in a safe, efficient manner and that repayment contracts are properly administered.

Table 27
Dams Managed by the State Water Projects Bureau
and Owned by DNRC

Reservoir	Year Completed	Storage (acre-ft.)	High Hazard*	Operation and Maintenance Manual in Place	Emergency Action Plan in Place	County
Ackley	1938	5,975	Yes	Yes	Yes	Judith Basin
Bair	1939	7,029	Yes	Yes	Yes	Meagher
Broadwater-Missouri (Toston)	1940	3,000	Yes	No	Yes	Broadwater
Cataract	1959	1,478	Yes	Yes	Yes	Madison
Cooney	1937	28,140	Yes	Yes	Yes	Carbon
Cottonwood	1953	1,900	Yes	Yes	Yes	Park
Deadman's Basin (dam and dike)	1941	76,900	Yes	Yes	Yes	Wheatland
East Fork of Rock Creek (Flint Creek)	1938	16,040	Yes	No	Yes	Granite

continued on page 90

Table 27
Dams Managed by the State Water Projects Bureau
and Owned by DNRC (continued from page 89)

Reservoir	Year Completed	Storage (acre-ft.)	High Hazard*	Operation and Maintenance Manual in Place	Emergency Action Plan in Place	County
Fred Burr	1948	516	No	No	Yes	Ravalli
Frenchman	1952	3,752	No	No	Draft	Phillips
Glacier (two dams)	1937	4,200	Yes	No	Yes	Carbon
Martinsdale (two dams)	1939	23,080	Yes	Yes	Yes	Wheatland
Middle Creek (Hyalite)	1951	10,184	Yes	Yes	Yes	Gallatin
Nevada Creek	1938	12,640	Yes	Yes	Yes	Powell
Nilan (two dams)	1951	10,092	Yes	Yes	Yes	Lewis and Clark
North Fork Smith River	1936	11,500	Yes	Yes	Yes	Meagher
Painted Rocks	1940	32,362	Yes	Yes	Yes	Ravalli
Ruby	1939	38,850	Yes	Yes	Yes	Madison
Tongue	1939	79,071**	Yes	Yes	Yes	Big Horn
Willow Creek	1938	18,000	Yes	Yes	Yes	Madison
Yellowwater (dam and dike)	1938	3,840	Yes	Yes	Yes	Petroleum

* A "high hazard" dam is one whose failure would endanger lives. This classification is not a reflection on the actual condition of the dam.

**The rehabilitation project increased storage capacity at Tongue River Reservoir.

Table 28
Dams Managed by the State Water Projects Bureau
and Owned by DFWP

Reservoir	Year Completed	Storage (acre-ft.)	High Hazard*	Operation and Maintenance Manual in Place	Emergency Action Plan in Place	County
Ashley Lake	Unknown	20,400	No	No	Yes	Flathead
Bearpaw	1958	535	Yes	Yes	Yes	Hill
Clearwater Fish Barrier (Lake Inez)	1963	>50	No	No	No	Missoula
Gartside	1962	326	Yes	Yes	Yes	Richland
Johnson	1930s	208	No	No	Yes	Hill
Knowlton	1890	166	No	No	Yes	Teton
Park Lake	1872	225	Yes	Yes	Yes	Jefferson
Rainy Lake Fish Barrier	Unknown	>50	No	No	No	Missoula
South Sandstone	1975	940	No	No	Yes	Fallon
Whitetail	1930s	198	No	No	Yes	Daniels

* A "high hazard" dam is one whose failure would endanger lives. This classification is not a reflection on the actual condition of the dam.

Table 29
Leases Associated with DNRC-Owned Water Projects

Lease Type	Number of Leases	Annual Revenues
Cabin Site	26	\$4,032
Grazing	5	\$4,630
Right-of-Way	1	\$ 42
TOTAL	32	\$8,704

Project Rehabilitation

The project rehabilitation program identifies and corrects safety and operational deficiencies on state-owned projects. Projects rehabilitated or partially rehabilitated during FY 1999 include the Tongue River Dam and Nilan East Dam.

Tongue River Dam

The Tongue River project will result in the rehabilitation, repair, and enlargement of the Tongue River Dam; partial fulfillment of the Northern Cheyenne Indian Reserved Water Rights Settlement Act; and the conservation, development, and enhancement of fish and wildlife resources and habitat in the Tongue River basin. The project is a partnership involving the State of Montana, U.S. Bureau of Reclamation, and Northern Cheyenne Tribe. Construction on the rehabilitation of the dam was substantially completed on May 28, 1999, with the final project completion scheduled for the end of July 1999. An official dedication ceremony was held onsite on July 2, 1999, with Governor Marc Racicot serving as the keynote speaker. Management of the dam will be turned over to the Tongue River Water Users Association on August 1, 1999.

The total cost of the project was approximately \$48 million, which is cost-shared between the State of Montana and the federal government. The State Water Projects Bureau contributed engineering design review and project oversight for the Tongue River project in FY 1999. The status of all project components is shown in Table 30.

Table 30
Status of Tongue River Project Components

Phase	Component	Comments/Status	Outlook
Phase I	Roads, aggregate, and site preparation	Completed	Not applicable
Phase II	Roller-compacted concrete emergency spillway	Completed	Not applicable
Phase II	Fish and wildlife enhancement	State-sponsored enhancement projects that are completed include a fish screen at the T&Y irrigation diversion, a conservation easement on the Hirsch Ranch, and development of a wetland south of the reservoir. The Badger Creek conservation easement and an agreement to abandon the SH Canal headgate are still pending.	Fish and wildlife enhancement issues are still being negotiated.
Phase III	Primary spillway and outlet works	Substantially completed as of May 28, 1999	Final completion is set for July 31, 1999. Warranty work is scheduled for the fall of 1999.
Phase III	State park and mitigation package	This package contains the reconstruction of the state park and the construction of a wetland. Both projects were completed in FY 1999. The final state park inspection occurred on May 24. DNRC has also agreed to transfer the Tongue River Project field office to DFWP as part of the mitigation package.	Not applicable

Lisk Creek Dam

The rehabilitation of the Lisk Creek Dam took place in FY 1997 and FY 1998. With the rehabilitation completed, in FY 1999 the project was transferred to the owners of the underlying property.

Nilan East Dam

During the annual dam safety inspection on April 6, 1999, four small depressions were observed in the reservoir area near the gatehouse of the Nilan East Dam. An investigative program was started during the week of April 12 to help determine the cause and extent of the depressions. The investigative program included backhoe test pits dug in the area of the depressions and drill holes placed through the crest of the dam and downstream from the dam.

Repair of the depressions was started on April 27, 1999, and completed on May 17, 1999. The repairs consisted of removal of the existing native material, placement of a compacted base, installation of a geotextile and bentonite liner around the perimeter and bottom of the excavation, and then replacement and compaction of the native clay material. A compacted layer of sand and gravel was placed on top of the clay and a geotextile liner placed over the area. Riprap was then placed over the liner to protect the repairs from erosion.

Because of their location, the depressions could have caused failure of the dam if left unrepaired. The cost of the repairs included \$42,924 for engineering and \$63,787 for construction, for a total cost of \$106,711.

Deadman's Basin Project - Barber Canal

The Helena office and the Lewistown Regional Office completed plans and project documents for the second phase of the Barber Canal rehabilitation project. This phase included repair and enlargement of rock riprap stilling basins below three drop structures, canal bank stabilization using rock riprap, and canal excavation to increase the flow capacity in the lower sections of the canal. The project was put out for bid in September 1998, and construction was completed in October and November 1998. The total construction cost for this phase was \$121,571. Funding included a \$48,000 renewable resource grant. The remainder of the cost was paid by the Deadman's Basin Water Users Association.

The third and fourth phases of the Barber Canal rehabilitation will include work to improve the canal inlet, three drop structures, and the county road and Highway 12 crossings. A consulting engineer will be hired to facilitate the design and construction management of these projects. The completed work will increase the flow capacity of the canal from 200 to 300 cubic feet per second (cfs). A renewable resource loan in the amount of \$437,000 and a grant of \$75,000 were approved by the 1999 Legislature to fund the projects. Engineering design will commence in the fall of 1999. Construction will be partially completed in the spring of 2000. All work on the rehabilitation will be done by May 1, 2001.

Broadwater-Missouri Pipe Span Project

The 1999 Legislature approved a renewable resource loan in the amount of \$509,000 to provide the Broadwater-Missouri Water Users Association with funding to rehabilitate the pipe that spans the Missouri River near Toston. The 7-foot-diameter, 666-foot-long steel pipe supplies irrigation water for 23,635 acres of wheat, barley, potatoes, and hay.

The pipe will be renovated in two stages. In the fall of 1999, the lining will be removed from the interior of the pipe, and the surface will be coated. In the spring of 2000, the exterior of the pipe will be treated to remove corrosion and painted. Also in the spring, the deteriorating walkway atop the pipe will be replaced, the expansion joint will be repaired and upgraded, and the buried portion of the pipe will be cathodically protected against corrosion.

An engineering consulting firm has been selected to develop construction plans and specifications for the project. Contracts will be let in the spring and fall for the renovation of the pipe's interior and exterior, respectively.

Seepage Monitoring

Seepage monitoring programs are required as a condition of the operating permits for all of the regulated high hazard dams in Montana. Of DNRC's twenty-one projects, nineteen are classified as high hazard (see Table 27).

During FY 1999, thirteen groundwater-monitoring wells were completed in the embankment and toe area at the Nilan East Dam. Sixteen additional monitoring wells and six vibrating wire piezometers were installed at the Tongue River Dam. The bureau was also awarded a \$100,000 grant from the renewable resource grant and loan program for the installation of seepage monitoring drill holes and piezometers at the Cottonwood Dam, Deadman's Basin Dam and Dike, Nilan North Dam, and Ruby Dam. These four projects were chosen due to existing seepage concerns and downstream hazards. It is anticipated that these monitoring wells will be installed during the fall of 1999.

Following this work, the bureau will have active monitoring programs at fourteen of the nineteen high hazard projects. The monitoring wells and piezometers are measured bimonthly during the irrigation season and monthly during the rest of the year by department staff or the dam operators. Seepage at the remaining five high hazard dams is monitored yearly as part of the annual inspection.

Project Management

The project management program administers the operation of the state-owned dams and oversees the repayment contracts with the water user associations. Additionally, the program protects water rights for the projects and oversees disposal of projects no longer appropriate for state ownership.

Project Disposition

The State of Montana originally became involved, many years ago, in various water conservation projects because there was a need for government to create employment opportunities and stabilize the agricultural economy. Governmental involvement in these projects no longer provides public benefits, and the projects are being transferred to water districts and private ownership. The listed activities were accomplished during FY 1999.

- The bureau released the Lisk Creek project and the Petrolia Reservoir project.
- Negotiations were initiated regarding the transfer of the Brady community water project to the local water district.
- Preliminary file reviews, financial status determinations, title searches, and field reviews were performed on the Winnett, Big Dry, Little Dry, Valentine, North Winifred, and Brady projects.

Water Measurement and Water Rights Activities

The State Water Projects Bureau is responsible for all activities required to protect, defend, and maintain water rights for all state-owned water projects.

In FY 1999, the bureau collected and recorded bimonthly reservoir storage data for 17 state-owned reservoir projects. The bureau also operated and maintained 30 permanent stream- and canal-gauging stations associated with state projects. This data collection included tabulating and recording annual discharge summaries for all stations for FY 1999.

The bureau also installed staff gauges and initiated monitoring of the five tributaries immediately above the Painted Rocks Reservoir. These gauges will be used to provide inflow data for use in implementing the Operating Plan for Painted Rocks Reservoir that was first developed in FY 1999.

The State Water Projects Bureau previously requested the Montana Water Court to clarify its project water rights by consolidating its claims, which were originally filed for five uses (storage, irrigation, stock, domestic, and municipal), into claims for "Sale of Water" for those same purposes. The proposed clarification of purpose would allow the place of use for the water to be described in more general terms, i.e., as a general service area described by township, range, and county only. The proposed consolidation and clarification of DNRC's claims would not change the historical purpose of water use from the state projects, but only more accurately and concisely reflect that historical use. A decision on this issue is still pending before the Water Court in Case No. 76HE-166 involving DNRC's Painted Rocks Reservoir project. A stipulation has been circulated and completed by all parties with the exception of Avista Corporation, which recently indicated that it is in agreement and would also sign.

In FY 1999 the State Water Projects Bureau continued settlement of unresolved objections to and case work on water rights for state water projects in various basins that are still in the preliminary stages of adjudication.

Administration of Project Lands and Leases

DNRC owns land surrounding state-owned reservoirs, supply canals, and water delivery canals. DNRC also assists DFWP in the operation and maintenance of 10 dams owned by DFWP. These lands are unique and are administered under a special set of statutes.

A repair project may be implemented at DFWP's Bearpaw Dam in Hill County due to a slump that occurred in the summer of 1998. The slump, located immediately to the west of the spillway retaining wall, could threaten the integrity of the spillway if left unrepaired. The proposed repair would involve removal of 3,500 cubic yards of material from the slope, establishment of a new 2:1 slope, and placement of the material at two fill locations located a short distance from the dam.

DNRC is in the process of selling the Fitzpatrick Ranch at the Nevada Reservoir near Helmville. The house is on the Register of National Historic Places but is in need of maintenance and repair. The appraisal and survey work have been completed. Powell County has expressed interest in acquiring the ranch property for

the possible development of a museum and living-history, interpretive exhibit. A conservation easement and management plan are currently being drafted by the county.

Other projects are currently being evaluated for disposal of nonessential project property. Land management responsibilities and the associated costs and liabilities are factors motivating this process.

Noxious weed control is an ongoing problem at almost all of the department's projects. The six-year Noxious Weed Plans were developed in FY 1997 and are now in the implementation phase. All weed control costs are borne by the water user associations. Weed control reports for FY 1998 and FY 1999 were mailed to each of the county weed supervisors where water projects are located. The reports summarize weed control activities for the past two years at each of the water project locations. They will be completed by the respective water user associations for FY 1999 and submitted to the Montana Department of Agriculture in the fall of 1999.

Hydropower

The hydropower program administers the development and operation of hydro-power facilities on state-owned water projects. To date, one hydropower facility, the Broadwater Power Project near Toston, has been built. With a maximum capacity of 10 megawatts, the project began generating power in June 1989.

DNRC owns and operates the facility and contracts with Montana Power Company (MPC) to sell the energy. Earned revenues are used to pay for rehabilitating other state-owned water projects. In an average year, the project generates roughly \$3 million in earned income from energy and capacity sales. After debt payments and operation expenses, approximately \$900,000 is available annually to rehabilitate state-owned dams.

During the past year, the hydropower staff worked on several special projects including an upgrade of the plant's control system hardware and software and a seismotectonic study for the Federal Energy Regulatory Commission (FERC). The staff has contributed additional support in fine tuning the emergency warning system at the East Fork Dam in Granite County.

The department, along with other state agencies, continues its role as an intervenor in the utility restructuring process before the Public Service Commission. The department is concerned about potential impacts of restructuring on future revenue from the Broadwater Power Project, which is presently committed to paying off development bonds and rehabilitating water projects such as the Tongue River Dam. In addition, the department was a party to a suit filed in Broadwater County District Court against MPC for breach of contract. This action was initiated because of MPC's shutdown orders and adjustments to project income in 1997 and 1998. The case was recently settled through mediation. The department also filed suit in Lewis and Clark County District Court against MPC to stop the transfer of the department's contract without the department's prior consent. This issue was resolved when MPC acknowledged that DNRC's approval is a condition for contract assignment.

Generally, Missouri River flows at Toston from July 1998 through June 1999 were above average. Spring runoff in June 1999 was well above average. High flows that exceed the turbine capacity reduce the project's generating capacity. High flow and heavy debris conditions existed from mid-May through the end of June, resulting in significant off-line time and reduced capacity. Annual maintenance was performed in August 1998, requiring about 80 hours of downtime. Some maintenance was also performed in June 1999 during the spring runoff season. For the remainder of the year, downtime was minimal, and capacity was above average. Statistics concerning the Broadwater Power Project during FY 1999 are shown in Table 31.

Table 31
Broadwater-Missouri Power Project in FY 1999

Operating availability	97 percent
Gross energy generation	58,411,395 kilowatt-hours
Gross revenue from sales	\$ 3,032,428
Investment income	\$ 249,262
Operating costs	(\$376,302)
Bond payments	<u>(\$2,029,884)</u>
Net revenue	\$ 875,504

Water Management

The Water Management Bureau (WMB) provides educational, technical, and other types of support in (1) solving statewide water resource issues and policy concerns, (2) protecting Montana's interests in regional and international river basins, and (3) assisting local watershed groups solve water management issues and problems. WMB staff also provide technical support to other DNRC bureaus and water user groups in Montana.

Watershed Management

WMB staff worked in the following watersheds in FY 1999:

Big Hole River	Missouri River	Shields River
Bitterroot River	Nevada Creek	Smith River
Clark Fork River	North Fork of the Blackfoot River	Sun River
Flathead River	Rock Creek, tributary of the	Swan River
Flint Creek	Clarks Fork Yellowstone	TenMile Creek
Milk River	Ruby River	Yellowstone River

Examples of WMB watershed activities are described below.

Big Hole River

WMB staff continued to provide technical support to the Big Hole Watershed Committee. Staff gathered hydrologic information for determining the effects of irrigation on river flows throughout the year. The study is being completed in

cooperation with the U.S. Bureau of Reclamation (USBR) and the Montana Bureau of Mines and Geology. Two investigations were initiated in the spring of 1999. One is to assess the amount of water that could be stored in the proposed Twin Lakes storage site, and the other is to determine whether this stored water could be released into Big Spring Creek to benefit flows in the Big Hole River during times of drought. Synoptic flow measurements in Big Spring Creek began in the summer of 1999, and a temporary gauge was installed at the outlet of lower Twin Lake. Staff is beginning to provide minor planning assistance to the Big Hole Watershed Committee, and more assistance is planned for FY 2000.

Bitterroot River

WMB continued to provide staff support and technical assistance to the Bitterroot Water Forum. Staff helped the forum implement two 319 grants from Department of Environmental Quality for assessing changes in water quality. A third grant, from EPA, is being used to educate local residents on water quality and quantity management within the watershed. DNRC also provided a Watershed Assistance Grant to the forum and the Bitterroot Conservation District.

WMB staff also helped the forum establish a Bitterroot basin closure, create a water education series, initiate watershed restoration work in a number of tributary watersheds, begin a land stewardship education series, and continue working on building the GIS database of the watershed that identifies irrigated lands and diversion ditches. Staff provided information, materials, and speakers to five special interest group meetings and to one large public meeting on basin closure. WMB staff helped plan and gave presentations at two workshops on basic Montana water right laws and procedures. The staff is also helping plan three additional workshops on water-related topics for water users next year. WMB staff helped present the Mill Creek "Know Your Watershed" workshop.

Clark Fork River

WMB continued to provide staff support to the Upper Clark Fork Steering Committee. In addition to providing general technical assistance, staff began investigating ways to better manage the relationship between surface water and groundwater in the basin and to assist with the Total Maximum Daily Load (TMDL) process. Staff continues to oversee the study, which is assessing the appropriate targets for TMDLs on impaired and dewatered streams. WMB also provided secretarial support to the Upper Clark Fork Steering Committee by recording and preparing minutes of monthly meetings.

Flathead River

WMB staff served on the Flathead Basin Commission, helped coordinate international activities with British Columbia for the basin commission, and sat on the TMDL committee. Staff wrote the TMDL renewable resource grant application. The application was funded by the Montana Legislature, and staff is now assisting with implementing the grant for reducing pollution into Flathead Lake. The TMDL project is called the Voluntary Nutrient Reduction Strategy with a goal to use education, technical assistance, and demonstration projects to convince and help residents mitigate point and nonpoint sources of pollution into Flathead Lake.

Flint Creek

WMB staff completed a return flow investigation for water users in the Flint Creek drainage. USBR is using the study results to assess possible improvements in water conservation. The results are intended to help local water users improve management of the watershed's surface water and groundwater supplies for irrigation, water quality, and the fishery. WMB obtained funds from USBR to continue monitoring diversion and surface water flows for 1998 and 1999 and to refine and verify previous study results.

WMB staff oversaw the completion of a Montana State University graduate student's masters degree research project that investigated the interrelationship between surface water and groundwater in the Flint Creek drainage. Funding for the study was obtained by WMB.

Milk River

The WMB and Glasgow Regional Office staffs are working with USBR, local irrigation districts, and other users to solve water management and distribution issues within the Milk River Basin. A three-year grant has been received from USBR to help the eight irrigation districts (organized into three divisions) better understand how water is managed within the drainage, to learn about more efficient water conservation practices, and to assist the local irrigation districts develop water conservation plans.

Four quarterly *Milk River Watershed* newsletters were published and mailed to over 1,000 water users in the Milk River basin. WMB and the Glasgow Regional Office obtained the articles, and WMB edited, published, and mailed the newsletter.

WMB obtained additional funding from USBR to help the Reserved Water Rights Compact Commission develop a GIS water right and water use database for the Milk River. This database has been completed. Additional monies were obtained to place ArcView, the Milk River Water right database, and computers into the three Milk River irrigation division offices. DNRC is helping the irrigation districts use the software and database to improve basin-wide water management.

WMB and the Glasgow Regional Office worked with the Milk River irrigation districts and USBR to form a "Joint Board of Control" for the Milk River basin. The objective of the joint board is to assist the eight irrigation districts become more efficient in managing the entire Milk River basin's water supply. The joint board was formed on July 26, 1999.

WMB staff, with the assistance of the Glasgow and Havre Regional Offices, organized a "Know Your Watershed" workshop that was held in late January with over 200 individuals participating from the Native American Tribes, Alberta, Saskatchewan, and Montana. The highlight of the conference was a video that provided an excellent tour and overview of the Milk River Basin.

Missouri River

WMB continued to provide staff support to the Fort Peck Advisory Council in its efforts to develop more recreational opportunities around Fort Peck Reservoir and to respond to Missouri River issues that could impact Fort Peck Reservoir.

Nevada Creek

In cooperation with the State Water Projects Bureau, WMB obtained funds from USBR to measure sediment inflows and releases from Nevada Creek Reservoir. In the fall of 1998 and spring of 1999, WMB staff installed sampler intakes and automatic suspended-sediment samplers near the stream gauging stations above and below the reservoir. Samples are being taken daily (or more frequently) from May through October and will be analyzed to determine the effects of the reservoir on sediment loads in Nevada Creek.

North Fork of the Blackfoot River

WMB staff assisted local water users and the Blackfoot Challenge with a water conservation study for the North Fork of the Blackfoot River. WMB obtained funds from USBR to conduct the three-year investigation. The U.S. Geological Survey (USGS), USBR, and WMB installed stream- and diversion-measuring devices. The investigation began in the spring of 1997 and will continue until 2000.

Rock Creek, Tributary of the Clarks Fork Yellowstone

WMB staff worked with the Billings Regional Office and USBR to install five stream gauging stations on Rock Creek and began collecting data. WMB will analyze these data to help water users better manage water supplies in Rock Creek and releases from Cooney Dam.

Ruby River

WMB staff is still assisting the Ruby River water users implement and refine the water management plan for mitigating the potential for dewatering certain stretches of the Ruby River. WMB also rated and maintained a number of streamflow gauges for the water users. This activity will be ongoing for a few more years.

Shields River

WMB is beginning to provide staff assistance to the Shields River Watershed Group to assess the potential for improving water storage and conservation in the basin. WMB assessed the need for measuring devices on irrigation diversions and on the river. Outside funding is being sought to purchase and install measuring devices.

Smith River

WMB staff was requested by the local conservation districts and the U.S. Natural Resources Conservation Service (NRCS) to determine the effects of irrigation in the upper reaches of the Smith River on downstream river flows and the effects of converting flood irrigation to sprinkler irrigation on downstream water supplies.

Staff is designing the study and then plans to seek approval from the Meagher County CD and local water users before proceeding with the investigation.

Sun River

WMB staff assisted the Sun River Watershed Group by operating and collecting streamflow data from a gauging station on Elk Creek. The group has requested additional assistance in conducting a hydrologic water balance analysis of the Sun River Basin.

Swan River

WMB staff assisted Plum Creek Timber Company, DEQ, EPA, the Flathead National Forest, the Flathead Lake Biological Station, local water users, and concerned citizens complete a two-year hydrologic and water quality investigation of Swan River and Swan Lake which began in the spring of 1997. The study objective was to assess nutrients and organic loads and then to find ways to mitigate them. This was the first phase of a TMDL process for the Swan River drainage.

Tenmile Creek

WMB is in its fourth year of providing staff and facilitation support to the Upper Tenmile Watershed Steering Group. The group is working to resolve problems related to stream dewatering, riparian habitat, and water quality within the watershed, which is the primary water supply for the City of Helena. In 1999, WMB wrote and coordinated the completion of the second riparian restoration project with funding from the state's Future Fisheries Program. About 5,000 plants were planted in the riparian corridor during the past two years. A third project is planned for 2000. WMB staff also wrote and obtained an EPA grant for monitoring changes in water quality following the large-scale cleanup of four abandoned mine complexes in the basin; the cleanup is currently in progress. WMB is also facilitating the development of a comprehensive watershed plan.

Yellowstone River

WMB staff provided support to the Governor's Upper Yellowstone River Task Force. Activities included serving on the task force's technical advisory committee, providing liaison with state and federal agencies, organizing the task force's monthly meetings, writing and monitoring grants, responding to information requests from the task force, and conducting other duties as assigned by the task force.

With assistance from the WMB staff, the Park Conservation District and the Upper Yellowstone River Task Force submitted a resource development grant proposal and secured about \$300,000 to investigate the cumulative effects of river channel modifications on channel hydraulics and stability. Other components of the cumulative effects investigation are being developed and will examine effects of bank stabilization on riparian vegetation and fish and wildlife habitat. Scientific and engineering studies will take two to four years to complete and will be conducted by WMB, the Water Resource Division of USGS (Montana Office), the Biological Resource Division of USGS (Fort Collins), University of Montana School of Forestry, and the U.S. Fish and Wildlife Service. The work is being

conducted cooperatively with the U.S. Army Corps of Engineers and other state and federal agencies with regulatory authority. A technical advisory committee of the task force oversees the work.

Protection of Montana's Water

DNRC has statutory responsibility to protect Montana's water resources in interstate and international water allocation and management proceedings and decisions. DNRC activities in protecting Montana's water during FY 1999 are described below.

Lower Missouri River

WMB staff provided DNRC Director Bud Clinch, who is Montana's representative on the Missouri River Basin Association, with guidance and support in connection with ongoing discussions and negotiations with the other Missouri River basin states and tribes over river management. The significant issue being addressed is the formulation of the new Master Manual for the operations of the Missouri River system. In addition, a WMB staff person served on the association's technical committee that reviews and recommends annual operations of the Missouri River reservoirs. Staff also reviewed various congressional and federal actions that may impact the operation and management of the Missouri River.

Columbia River

As necessary, WMB staff provided advice and assistance to DNRC officials, the Northwest Power Planning Council, the Flathead Basin Commission, and the Governor's Office on issues affecting the operation and management of the Columbia River system.

North Fork of the Flathead River

As appropriate, WMB staff continued to coordinate communications between British Columbia and the Flathead Basin Commission to protect the state's interests in the North Fork of the Flathead River drainage. WMB staff obtained long-term funding to monitor river flows and water quality continually at the international gauge on the North Fork of the Flathead River.

Poplar River

WMB staff continued to coordinate with Saskatchewan Water Corporation regarding the annual release of water from Cookson Reservoir into the East Fork of the Poplar River, in accordance with the International Joint Commission's recommended apportionment. Staff worked with USGS to ensure that Montana receives its rightful share.

Milk River

The Milk River International Alliance, a grass roots organization of water users from Montana, Alberta, and Saskatchewan and local, state, and federal government officials, was formed in March 1999. Its goals are to provide education, technical assistance, and coordination in improving the management of water supplies

within the Milk River basin. WMB staff met with the International Joint Commission and staff for a two-day tour of the St. Mary and Milk River basins and a meeting on issues that affect Montana, Alberta, and Saskatchewan. Issues included funding, accuracy of the international apportionment, and water management problems associated with water shortages and water quality.

Protection and Use of Montana's Groundwater

Examples of WMB's groundwater protection and use activities are identified below.

- WMB staff compiled groundwater data and established temporary groundwater monitoring networks for various areas, including one near Red Lodge, to better resolve water right disputes and groundwater problems.
- WMB staff continued to assist with the implementation of the Medicine Lake groundwater study in Sheridan County and to assist the Sheridan County Conservation District in managing its groundwater reservation.
- WMB staff completed a draft of the *Upper Flathead Valley Groundwater Characterization Study*. The study was designed to help understand and characterize the aquifers in the upper Flathead River valley.
- WMB staff worked with the water resources regional offices in reviewing and analyzing groundwater rights, permit applications, and water right complaints and assisted with water monitoring within the Yellowstone National Park Controlled Groundwater Area. A WMB staff person chaired the Yellowstone National Park Technical Oversight Committee and is a member of the Groundwater Assessment Steering Committee.

Water Resource Education

WMB provides water resource education to water users and other water interests across the state. The goal is to provide citizens with the tools and knowledge to solve their own watershed and water resource problems. Specific activities in FY 1999 include the following.

WMB staff provided a training session to water users and water commissioners in the Bitterroot River basin on how to measure and distribute water in accordance with Montana water law.

WMB staff at Montana State University (Montana Watercourse) assisted local water users develop and conduct "Know Your Watershed" (KYW) workshops in different watersheds throughout Montana. A KYW workshop was conducted in the Milk River basin in January 1999. This workshop included the development of a video tour and overview of the entire basin. WMB staff raised \$30,000 through grants to pay the cost of preparing the video. WMB plans to prepare a booklet to accompany the video so that it can become a better educational tool for water users, affected citizens, and students in the Milk River drainage.

WMB staff, through the Montana Watercourse, conducted a KYW Workshop for the Rocky Boy's Tribes in September and two follow-up workshops in the Bitterroot basin. Also, the Gallatin Watershed Source Book was completed in September and the *Wetland Guide for Landowners* in June. These booklets were designed to help homeowners, city planners, and landowners understand and solve local wetland and water issues within the Gallatin Valley and throughout the state. WMB staff also plans to publish a *Know Your Watershed Guide Book*. The guidebook is intended to help local water users design and conduct their own KYW workshops. Nine other KYW workshops have been held in different basins over the past four years.

WMB staff helped plan and conduct a three-day workshop and tour within the Flathead and Blackfoot basins to help teachers understand how water is used and managed within their respective basins. Funding for the workshops was obtained from EPA and the Bonneville Power Administration. Responsibility for the Flathead workshop has been turned over to the Glacier Institute.

Improvement of Statewide Water Management

WMB helps governments and local water users improve local water management. A number of those activities in FY 1999 are described below.

WMB staff, working with various water users, educators, and local, state, and federal agencies, has completed the *Montana Groundwater Plan* section of the State Water Plan. The plan sets forth recommendations for improving public and private management of the state's groundwater with a goal of sustaining current and future uses. Both the Environmental Quality Council and the Water Policy Subcommittee approved the groundwater plan before it was submitted to the 1999 Montana Legislature. It is now another component of the State Water Plan.

WMB staff has been actively involved in discussions and negotiations with Avista (formerly Washington Water Power) on the relicensing of its hydropower facility at Noxon Rapids and Cabinet Gorge. WMB is a member of the Water Resources and the Fisheries Working Groups and Management Committee. WMB has been trying to incorporate conditions into Avista's FERC license that are intended to improve overall water management in the basin and to protect existing junior water right users. WMB drafted a proposed temporary two-year basin closure on the issuance of new water use permits which was adopted by the 1999 Montana Legislature. The closure affects the Clark Fork River basin, including the Flathead River upstream of the Noxon Rapids hydropower facility. During the two-year moratorium on the issuance of new water rights, the state and Avista are to negotiate a mutually acceptable agreement.

WMB staff has also been working with DEQ to ensure that the relicensing of Missouri River hydropower facilities by FERC will not impact other water users and interests in the basin. WMB submitted comments and concerns to FERC and will review the final EIS with regard to how FERC addressed these concerns. WMB staff continued to be a member of Montana Power Company's Water Quality Technical Oversight Committee.

WMB staff completed a research project on the legal, institutional, and administrative procedures used by other western states to manage surface water and ground-

water conjunctively within basins. This issue is becoming more important as more river basins are being closed to new appropriations of surface water and water users are turning to groundwater to find additional supplies. WMB plans on addressing this issue through the state water planning process in 1999-2000.

WMB, in cooperation with other state and federal agencies, is preparing a *Water Resource Reference Document* that describes the evolution of Montana water law, federal law, water uses, instream flow needs, water quality issues, and other water-related issues affecting water management and use in Montana over the last century. The report will reference the institutional framework, all the relevant technical studies and data, and significant activities that have occurred in the last 100 years with emphasis on the last 25 years. This document should help water managers in the 21st century understand where we have been and what work has been done. The document is intended to prevent duplication of activities in the future and to be an excellent reference document of what studies have been done and what data have been collected.

WMB staff actively participated on the Montana Watershed Coordination Council. The goal of the council is to provide better coordination, technical assistance, funding, and educational information to local watershed groups throughout Montana so that they can do a better job of resolving water resource problems. One WMB staff member continued to be a member of the Agenda Committee, a member of the Watershed Activities Work Group that reviews 319 grant applications, and chair of the Watershed Linking Work Group. Another member continued to be on the Administrative Work Group. Another chaired the Groundwater Working Group. All will continue their participation on the council.

WMB staff supported and coordinated activities of the Governor's Drought Committee. Last year, the drought committee held seven meetings. The *1998 Drought Status Report* was prepared and submitted to the governor in April. WMB provided staff support and worked closely with the Lt. Governor, who is the chair of the Governor's Drought Committee. The committee is responsible for implementing the *Montana Drought Response Plan*. The status report describes the potential for drought and, if appropriate, different response actions at the state and local level.

WMB staff prepared and distributed monthly water supply and moisture condition reports to local, state, and federal governments, statewide news media, and other interested parties.

In November 1998, prior to the legislative session, WMB staff prepared and submitted the *Water Storage Status and Priorities Report* to the Governor and the legislature. The report described and prioritized the plan for rehabilitation of existing projects and construction of new storage projects in Montana.

WMB staff worked with DEQ (lead agency) and the Montana Wetland Council in developing a Montana wetland strategy. DEQ may take the strategy through the state water planning process and include it as a section of the State Water Plan. WMB staff participated on the working group that has been developing the draft wetland strategy.

Development of Drinking Water Supplies

WMB staff assisted the state team that is trying to facilitate the planning and development of the North Central Rural Water Supply System. The team is helping the Ad Hoc Committee work through the regulatory processes and funding. The Chippewa Cree Tribe of the Rocky Boy's Reservation, a number of communities, and rural and municipal water associations were involved in the project. WMB oversees the expenditure of funds received from the 1997 Legislature for the necessary feasibility studies and assists with economic and financial aspects of the project. WMB staff also evaluated alternative sources of water supply that may be needed in the future.

WMB staff represented the division in monitoring development of the Dry Prairie Rural Water Supply Project, which is located in the northeastern corner of the state.

Other Important Water Management Activities

WMB staff assessed the effects of deregulation on the operation of the Toston hydropower facility and offers for the purchase of the Power Purchase Agreement with Montana Power Company. Staff estimated the value of the project and assessed various scenarios resulting from attempts to mitigate the stranded costs presented by the contract.

WMB staff coordinated and completed a major five-year investigation that determined arsenic transport and mobility in surface water and groundwater in the upper Missouri River basin. Arsenic levels in the upper Madison and Missouri rivers are very high and pose a significant problem in the upper Missouri, which could affect future irrigation development and drinking water supplies. This study was conducted in cooperation with USBR, USGS, Montana State University, and the University of Montana.

WMB staff continued to respond to a request by the Montana Environmental Quality Council and legislators to describe the impacts and effects of the sale of Montana Power Company's hydropower facilities. Issues include the effects on existing water users, the value of water rights, headwater benefits from water released from Canyon Ferry Dam, and other questions.

WMB staff developed reservoir operation guidelines for most of the state-owned water storage projects. The guidelines are used to ensure that the reservoirs fill, minimize flooding, and address other reservoir problems. WMB staff also provided weather forecasting and snow pack information to State Water Projects Bureau personnel.

WMB staff completed the environmental assessment on the proposed West Crane Project. This project will divert water from the lower Yellowstone River to irrigate 12,000 acres of sugar beets. The assessment work was coordinated with the U.S. Fish and Wildlife Service, USBR, EPA, DFWP, and U.S. Army Corps of Engineers.

WMB staff prepared two environmental assessments for the State Water Projects Bureau. One was for the S & H Canal Fish Exclusion Project, and the other was for the Badger Creek Ranch Wildlife Conservation Easement.

WMB staff continued to lay out and publish the Water Resources Division's newsletter, *Water Lines*, the Milk River Watershed News, flyers, and other documents of the division, as well as design and update the Web page for the Water Resources Division.

A number of WMB staff provided technical assistance and advice to the Reserved Water Rights Compact Commission in its negotiations with the Native American Tribes on the Rocky Boy's, Crow, and Fort Belknap Reservations and with the U.S. Forest Service.

WMB staff continued to assist the Water Operations Bureau with dam safety issues, such as the design of spillway standards for a number of storage projects, and with surveying.

WMB staff operated a gauging station on the T & Y Canal to assist local water users manage available water supplies. The gauging station was operated by WMB until reconstruction of the dam was completed, at which time it was turned over to the water users. Three WMB staff members continued to assist the State Water Projects Bureau upon request with other aspects of the Tongue River Enlargement and Rehabilitation Project.

Water Operations

The Water Operations Bureau administers dam safety, floodplain, and water measurement programs and provides staff support for the Board of Water Well Contractors.

Dam Safety Program

The primary purpose of the dam safety program is to ensure that dams that have the potential to cause loss of life downstream, if they fail, are properly constructed, maintained, and operated. An operation permit is issued to high hazard dams that have been found to be safe; currently, 89 dams in the state are permitted, high hazard dams. An estimated additional 2,800 dams in the state are regulated by the dam safety program, but do not require a permit. Regulation is exercised only if an emergency action is necessary to safeguard life and property.

Permitting of High Hazard Dams

To obtain or renew an operation permit, the high hazard dam owner must review and update the dam's emergency action, operation, and maintenance procedures and have an inspection conducted by a professional engineer. Often, conditions placed on an operation permit require that certain dam deficiencies be addressed. Failure to meet the conditions of an operation permit can result in a restriction on the reservoir level and/or a fine. The dam safety program issued or renewed six operation permits in FY 1999.

Any construction on a dam that could potentially be a threat to the dam's integrity requires a construction permit. The permit must be accompanied by design plans and specifications that are put together by a professional engineer. The dam safety program issued construction permits in FY 1999 for these four dams:

- Fred Burr Dam (Granite County)
- Storm Lake Dam (Deer Lodge County)
- Tongue River Dam (Big Horn County)
- Nilan Dam (Lewis and Clark County)

When a new dam is constructed or an existing dam repaired, the owner is required to apply for a hazard classification. A hazard classification is a determination of the potential for loss of life to occur downstream due to dam failure. In FY 1999, five hazard analyses were completed.

Public Awareness/Education

This year's dam safety conference, held in Butte, was a full day seminar on flood hydrology. The approximately 70 attendees were primarily practicing engineers working in dam safety. Federal funds received under the National Dam Safety Act were used to purchase several copies of the *Dam Owners Guidance Manual*, which was distributed to DNRC water resources regional offices throughout the state. The video series, *Training Aids for Dam Safety*, was copied and distributed to regional offices.

Permit Verification Program

Federal funding under the National Dam Safety Act was also used to launch a full-scale dam owner outreach program. All of the regional office engineers and the Helena-based dam safety program engineers participated. The goal of the program was to provide training to dam owners on how to accomplish the annual owner inspection. Another important component of the program is the review of emergency action plans and operation and maintenance plans. This program is still underway and should be completed in the fall of the year 2000.

Adoption of a New Spillway Standard

In April 1999, the Spillway Standards Committee, which has been meeting for the last two years, recommended a new spillway standard to the department. The committee consisted of 18 members with a wide range of backgrounds, from technical people to persons living downstream of dams. The recommended spillway standard is based on the population at risk below the dam. Dams with a large potential to cause loss of life will be required to pass a much greater storm than dams with a low potential to cause loss of life. The dam safety program is currently in the process of holding public meetings throughout the state to obtain public comment. A formal hearing will be held in the fall of 1999.

Seepage Monitoring Program

The dam safety program is continuing to promote the implementation of seepage monitoring for all high hazard dams. The goal of monitoring the seepage is to provide long-term records of seepage flows. Long-term records are extremely valuable in determining whether a dangerous situation is developing in dams. The dam safety program is also involved in a national effort to develop a free software product to be used by dam owners to record their seepage data.

Board of Water Well Contractors

The Board of Water Well Contractors is responsible for licensing water well drillers, water well contractors, and monitoring well constructors. The board, which is attached to the Department of Natural Resources and Conservation for administrative purposes, establishes water well construction standards and enforcement and training procedures. Composed of five members, the board consists of one technical advisor/hydrogeologist appointed by the Montana Bureau of Mines and Geology (MBMG), two licensed Montana water well contractors appointed by the governor, one member appointed by the DNRC director, and one member appointed by the DEQ director. Each member serves a three-year term. Current board members are:

Pat Byrne, Chair Great Falls Well Driller	Laurence Siroky, Vice Chair Helena DNRC	Robert N. Bergantino Butte MBMG	Eric Regensburger Helena DEQ	Kevin Haggerty Bozeman Well Driller
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Licensing

During FY 1999, 307 people were licensed in three categories: water well contractors, monitoring well constructors, and water well drillers. Seven of these were new licensees. Thirty-one former licensees did not renew their licenses.

Complaints and Investigations

This year, 55 written complaints were received, out of 195 initial inquiries. Thirty-one of the complaints were investigated for violations. Four faulty wells were repaired by the licensee without board action. No disciplinary actions are pending.

Public Awareness/Education

The Board of Water Well Contractors and the Montana Environmental Training Center held 18 continuing education classes and approved five programs by suppliers and manufacturers for continuing education credit. Water well inspector exams were given to one regional office staff person.

A newsletter, *Well Developments*, is published and distributed to license holders and other interested persons.

Floodplain Management

The Floodplain Management Section is responsible for the oversight of 110 locally administered floodplain management programs throughout Montana. The primary goal of the program is to reduce the loss of life and structural property through wise floodplain development. The secondary goals are to reduce the loss of functional floodplains and reduce the amount of erosion of stream banks due to unwise floodplain development.

Projects

The floodplain program manager coordinated the floodplain mitigation assistance program in Montana. This program is primarily to relocate structures out of the 100-year floodplain. The secondary purpose is to elevate structures to 2 feet above the base flood elevation. Structural projects will be greatly limited based upon the type of project, location, and a cost/benefit comparison with other alternatives. The overall goal is to reduce flood insurance expenditures in the long run.

General technical and engineering assistance was given to local and state governments, private property owners, and engineering consulting firms. The floodplain management program during the state FY 1999 sent out approximately 250 written responses to floodplain issues and concerns. Also, a total of 1,210 phone contacts were made during the second half of the federal FY 1999. Of these calls, 17 percent required follow-up.

No specific floodplain programs were evaluated by DNRC during the fiscal year. However, numerous programs were assisted over the phone, and the Federal Emergency Management Agency (FEMA) evaluated a number of communities in Montana.

Floodplain Management Studies

Floodplain management studies are ongoing in Carbon, Cascade, Lewis and Clark, and Petroleum Counties.

The floodplain management program signed an agreement with FEMA to become a Cooperating Technical Community. This will provide funding to the floodplain program to coordinate additional flood studies.

The 1999 Montana Legislature provided funding for floodplain management studies. A priority list is being compiled at this time, as well as a list of potential contractors to conduct the work.

Public Awareness/Education

A newsletter, *Highwater*, is published and distributed to local government floodplain officials and others.

Staff provided support to the Upper Yellowstone Task Force.

Other Activities

The program manager represents Montana on the National Association of State Floodplain Managers and has acted as the Regional Director for FEMA Region VIII.

The community assistance program manager prepared the bylaws and other materials for a meeting scheduled early in May to create the Association of Floodplain Managers. The meeting was held, and two department employees were elected to offices. The goal is to have a spring conference on floodplain management.

Water Measurement Program

The purpose of the water measurement program is to provide technical information and assistance in the measurement of surface water diversions. The program focuses on streams where dewatering causes conflicts between water users or impacts resources. Program staff has been investigating streams for possible inclusion.

Big Hole River

In January 1999, the Big Hole River was delisted from potential designation as a "chronically dewatered watercourse." The delisting was the result of substantive progress made by the Big Hole Watershed Committee in developing and implementing a Drought Management Plan. The plan prescribes a sequence of actions to be taken during drought years to maintain instream flows and reduce impacts to riparian resources.

Program staff continues to attend the DNRC monthly watershed meetings and provides snowpack and streamflow data to the committee. Program staff, in conjunction with the Water Management Bureau, is also conducting a hydrologic study of Big Lake Creek in the upper Big Hole River basin. The study will aid in determining the feasibility of creating a small storage project on Big Lake Creek. The stored water would be released to alleviate low flows on the upper Big Hole River.

Jefferson River

The water measurement program continues to work with Jefferson Valley irrigators to measure irrigation diversions. Additionally, the program is assisting local efforts to form a Jefferson River watershed group. The group would focus on improving conditions on the upper reaches of the river, addressing dewatering, fisheries, and water quality issues.

Musselshell River

Installation of measuring devices continues on Musselshell River diversions. Several field trips have been conducted to spot-check compliance and provide technical assistance to water users. The Lewistown Regional Office is assisting with these efforts.

Mill Creek

Measuring devices have been installed on the major diversions from this tributary of the Yellowstone River. Program staff continues to collect diversion measurements at random and maintain contact with the water users and with DFWP, which administers water leases on Mill Creek.

Water Rights

The mission of the Water Right Bureau is to ensure the orderly appropriation and beneficial use of Montana's waters. The two main programs are (1) adjudication, where the bureau assists the Water Court in identifying and evaluating pre-1973 water uses, and (2) new appropriations, which involves the administration and regulation of post-1973 water rights in Montana. In addition to operating the two programs, the Water Right Bureau is directed by the Montana Constitution to maintain a centralized water right record system.

Water Right Records

The system is comprised of three types of records: paper, microfiche, and electronic.

Paper Records

During FY 1999, the water right files were converted from a manual filing system to an automated filing system using barcode labels and a computerized location system. This project, which involved approximately 2,700 boxes, 260,000 files, and millions of pieces of paper, has improved access to and retrieval time for files. Additionally, the conversion provided an opportunity to conduct the first complete inventory of water right records in 26 years. This complete inventory will be an important stepping stone to integrating the data into an electronic document management system. Completed in less than one year, and in addition to the regular workload of the bureau staff, this project received the attention of the records management industry and has resulted in a nomination for a national award in records management excellence.

Electronic Records – Water Right Database

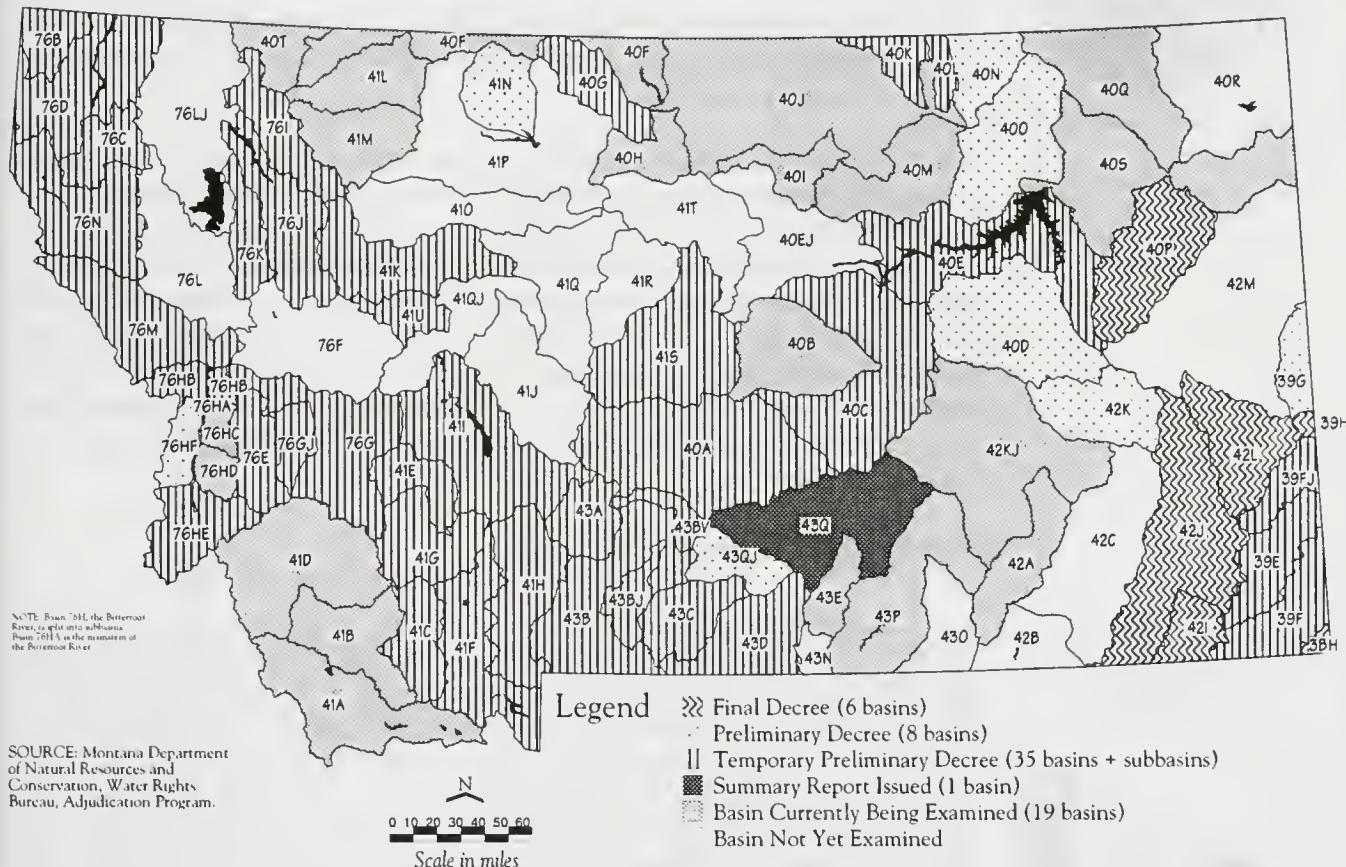
Another project was undertaken in FY 1999 to improve customer access to the water rights database. A wide variety of water right information, forms, and data is now available on the Internet at <http://www.dnrc.state.mt.us/wrd/wright/wtrrtweb.htm>. A "public access computer station," where the public can access our Internet information free of charge, is located in each regional office and in Helena's central office. This service is in addition to the microfiche, computer disks, and other information now available to the public. Finally, the water rights database is being redesigned to provide more flexibility in information gathering and report generation, increased mapping capabilities, and improved customer access and service.

Adjudication

During FY 1999, 2,691 claims in non-decreed basins were examined in the six of the eight Water Resources Division regional offices. Staff in these offices provided post-decree assistance to the Water Court. Regional office staff joined the court in working with hundreds of citizens to resolve issues and disputes on pre-1973 water use claims. Central and regional staff were also involved in preparing and issuing summary reports for the Poplar River basin and the Missouri River basin below Fort Peck Dam.

The Water Court issued a Temporary Preliminary Decree in December 1998 for the Yellowstone River basin, between the Clarks Fork Yellowstone and the Big Horn River basins (see Figure 31).

Figure 31
Montana General Adjudication Status



Staff in the Billings Regional Office assisted the Reserved Water Rights Compact Commission in the successful negotiation of a compact between the State of Montana and the Crow Tribe. Central staff were also involved in development of compact language.

New Appropriations

Applications for various types of water rights are received each year. Table 32 shows the number and types of applications and notices received and processed during FY 1999. These water right applications vary in complexity, depending on each region's water supply, area-specific competition for water, and the specific project request. Staff in the division's eight regional offices process these applications.

Table 32
Water Right Applications
in Fiscal Year 1999

	Received	Processed
Permits	300	284
Changes	200	194
Groundwater Certificates	2,810	2,651
Water Right Ownership Update	5,088	4,786
Exempt Water Rights	170	166
Extensions	90	94
Stockwater Permits	70	146
Project Completion Certifications	218	275
Verifications	0	84

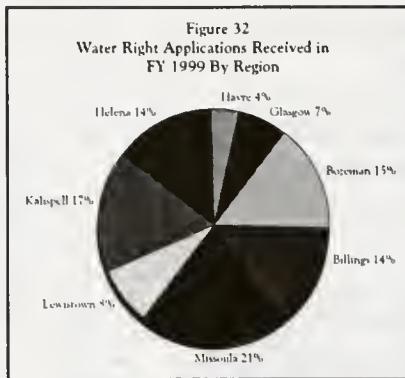


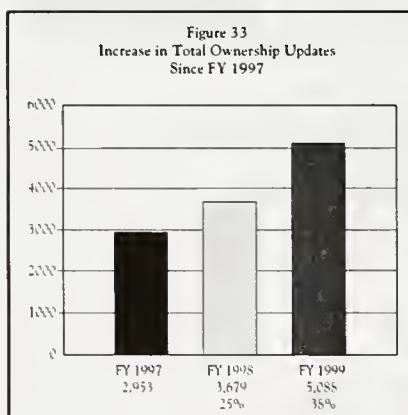
Figure 32 shows the geographical distribution of the applications received.

When applicants and objectors are unable to settle their differences, the file moves into the hearings process. During FY 1999, 32 files were sent to the Hearings Unit, and 12 hearings were held. Parties often settle cases after the hearing is scheduled.

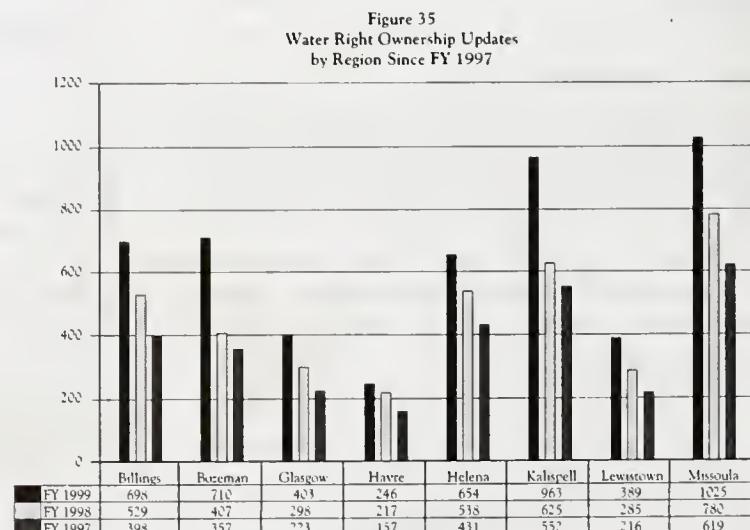
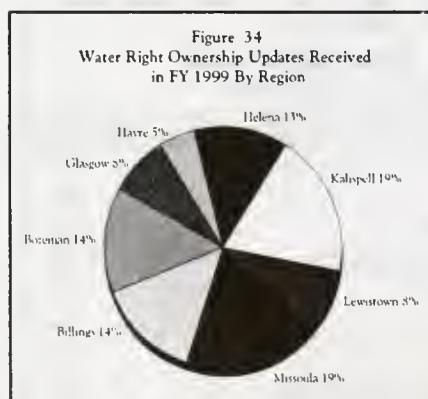
A controlled groundwater area in Bozeman was established early in FY 1999, and additional controlled groundwater areas in eastern Montana and in Butte have been proposed.

The 1999 Legislature closed the Bitterroot and Clark Fork/Flathead River basins in western Montana to most new surface water uses. Both closures are temporary. When the Montana Water Court develops an enforceable decree for the Bitterroot basin or subbasins, basin residents will have two years to determine whether they want to end, modify, or extend the basin closure. In the case of the Clark Fork/Flathead River basin, a temporary, two-year closure was created while the State of Montana and Avista negotiate some level of protection for the junior right holders from a call by Avista. Avista holds a large (50,000 cfs) hydropower water right at Noxon Rapids, which is located on the Clark Fork near the Montana/Idaho border.

Water Right Ownership Updates



When ownership of land in Montana changes, water rights may — or may not — follow. It is important that buyers and sellers discuss and identify the disposition of water rights in land transactions. It is the seller's responsibility to ensure that the water right's ownership is changed in the department's records. Legislation requiring a water right disclosure at or before closing a real estate transaction became effective January 1, 1998. FY 1999 is the first full fiscal year since the legislation became effective. Figure 33 displays the increase in these ownership updates over the past three fiscal years. Figure 34 displays each region's transfer activity during FY 1999, and Figure 35 shows the total water right transfer activity in each of the three fiscal years.



Regional Offices

The primary function of the division's eight regional offices is to work directly with the public in implementing programs for which the division is responsible. The regional offices play a large role in the accomplishments already discussed in this report concerning the division's programs. In addition, there are areas of special interest in the work of the regional offices over the past year that are highlighted here.

Billings - Crow Compact

The Billings Regional Office assisted the Reserved Water Rights Compact Commission in finalizing a compact that provided for a significant water right for the Crow Tribe while protecting the rights of all existing water right holders in the affected water basins. The Billings office assisted with numerous public meetings and did field work to ensure that every water user had an opportunity to attend public meetings and provide input. The Billings office also served as a coordinator for questions and comments from the public regarding the compact. The compact was passed and signed by the Montana Legislature in a June 1999 special session.

Bozeman

Bozeman Solvent Site Controlled Groundwater Area

The Bozeman Solvent Site Controlled Groundwater Area went into effect in July 1998. The area was established due to health concerns from a migrating plume of contaminants from the old Buttrey's store complex in Bozeman. The plume extends nearly three miles to the East Gallatin River north of town and is approximately one mile wide at its widest area of detection. Groundwater use in the area may still be permitted depending on the location, purpose, amount, and level of contamination. The petition process was a cooperative effort between the Bozeman Regional Office, DNRC Water Management Bureau staff, DEQ, and the Gallatin Local Water Quality District.

Gallatin Watershed Sourcebook: A Resident's Guide

This booklet was produced as a follow-up to a "Know Your Watershed" workshop held in Bozeman in 1996. The information is intended to raise the awareness of new and existing residents of the water resources of the Gallatin Valley. The information should be useful for a number of years to come. This well-directed effort will help educate the public about water rights and other water resource issues in a fast growing area. The Bozeman Regional Office contributed several sections and is involved with the distribution of the booklet, which was put together as a cooperative effort of the Bridger Outdoor Science School, Montana Watercourse, and NRCS. Copies may be obtained from the Bozeman Regional Office, Montana Watercourse, or NRCS.

Glasgow

Shared Division Staff

The Glasgow Regional Office recently hired a staff member who shares work responsibilities for both the Water Resources Division and the Conservation and Resource Development Division. In addition to implementing WRD programs, the position assists several conservation districts with administration of their reserved water rights. Specifically, the position will be looking for ways to streamline processing of reserved water rights, at both the conservation district level and the department level.

West Crane Irrigation Project

The Glasgow Regional Office played a key role in the coordinated issuance of a water right to the West Crane Sprinkler Irrigation Project. The project puts reserved water of Richland County Conservation District to use on 11,964 acres of newly irrigated land. The water will be diverted from the Yellowstone River at a flow rate of 132.5 cfs up to a volume of 29,320 acre-feet. The application was unique in that, initially, legislative approval was required because of the large appropriation of water. Just before the application was approved by the department, the legislature removed the statute requiring legislative approval. This project and potentially other, similar large irrigation development projects will be a boost to eastern Montana's economic health.

Havre/Glasgow - Formation of a Milk River Project Joint Board of Control

For many years, DNRC has supported the concept of forming a joint board of control for the eight Milk River irrigation districts that make up the Milk River Irrigation Project. In December 1998, a contract was entered into to facilitate meetings with the Milk River Project irrigation districts and relay the benefits of forming a joint board of control based on experiences with the Flathead Irrigation Project under similar conditions. Meetings were held with all of the irrigation districts individually. A contract and bylaws were drafted that took into consideration the concerns and comments of the districts. The Milk River Project Joint Board of Control became a reality on July 26, 1999.

Helena - GIS Applications

The Helena Regional Office has been developing applications for GIS in its water right activities. The GIS specialist is monitoring a contract for the design of software to interface with ArcView. This software package, called "wrmapper," is now in the final development phase. This program walks a water resource specialist through the claim examination mapping in a given basin. It uses a step-by-step prompt system to allow the examiner to select a water right and map on-screen the point of diversion, the ditch, the claimed place of use, and the examined place of use according to historical aerial photos. The package will print a report for each individual water right mapped. As the regional offices statewide become trained in GIS technology and applications, this examined information that is stored digitally will be available from the department's water right records.

Kalispell - Verification Pilot Project

Kalispell Regional Office staff developed a new verification pilot project utilizing questionnaire forms. The results have led to the project currently underway in the Helena Central Office to take the pilot project to all regional offices and to consultants to use in verifying permits and changes.

Lewistown

State Project Rehabilitation

The Lewistown Regional Office participated in the design, technical preparation, and construction management of rehabilitation activities on the Deadman's Basin and Ackley Lake state-owned water storage projects. The Deadman's Basin project was initiated to improve water quality in the lower Musselshell River by upgrading system conveyance capacities, and the Ackley Lake project was initiated to rehabilitate a deteriorated diversion structure. In addition, the 1999 legislature approved a grant/loan, written by the Lewistown Regional Office, in excess of \$500,000 for continued rehabilitation of the Deadman's Basin project.

Kendall Mine

The Lewistown Regional Office responds to many water right complaints. One of the most significant has been a complaint from numerous landowners against the CR Kendall Mine near Hilger. The complaint is multi-faceted, and the Lewistown staff has spent hundreds of hours in attempting to resolve the issues. The Lewistown office has coordinated efforts between many state and federal agencies, as well as responding independently with technical studies and site monitoring. Suggestions have been implemented to the benefit of some landowners, and negotiations to provide relief to other landowners are continuing.

Missoula

Geographical Information System

The Missoula Regional Office completed a test project using Geographical Information System and other computer database software to examine claims, rather than relying on the old paper system and drawing overlays on maps. While this system may have only marginal benefits in terms of processing time, it will potentially make the adjudication work products far more accessible and understandable to the public, because a water right decree abstract is a lot easier to understand if accompanied by a map. Furthermore, the maps being prepared will be permanently accessible as an easy-to-download digital record, rather than a single paper product that is more difficult to store and reproduce.

Public Education

The Missoula Regional Office also engaged in considerable public education and outreach in the past year. Multiple public meetings were conducted, including basic water rights workshops, meetings on the water right closure in the Bitterroot and Clark Fork basins, meetings cosponsored with the Water Court regarding ongoing adjudication activities, and a special training workshop for prospective wa-

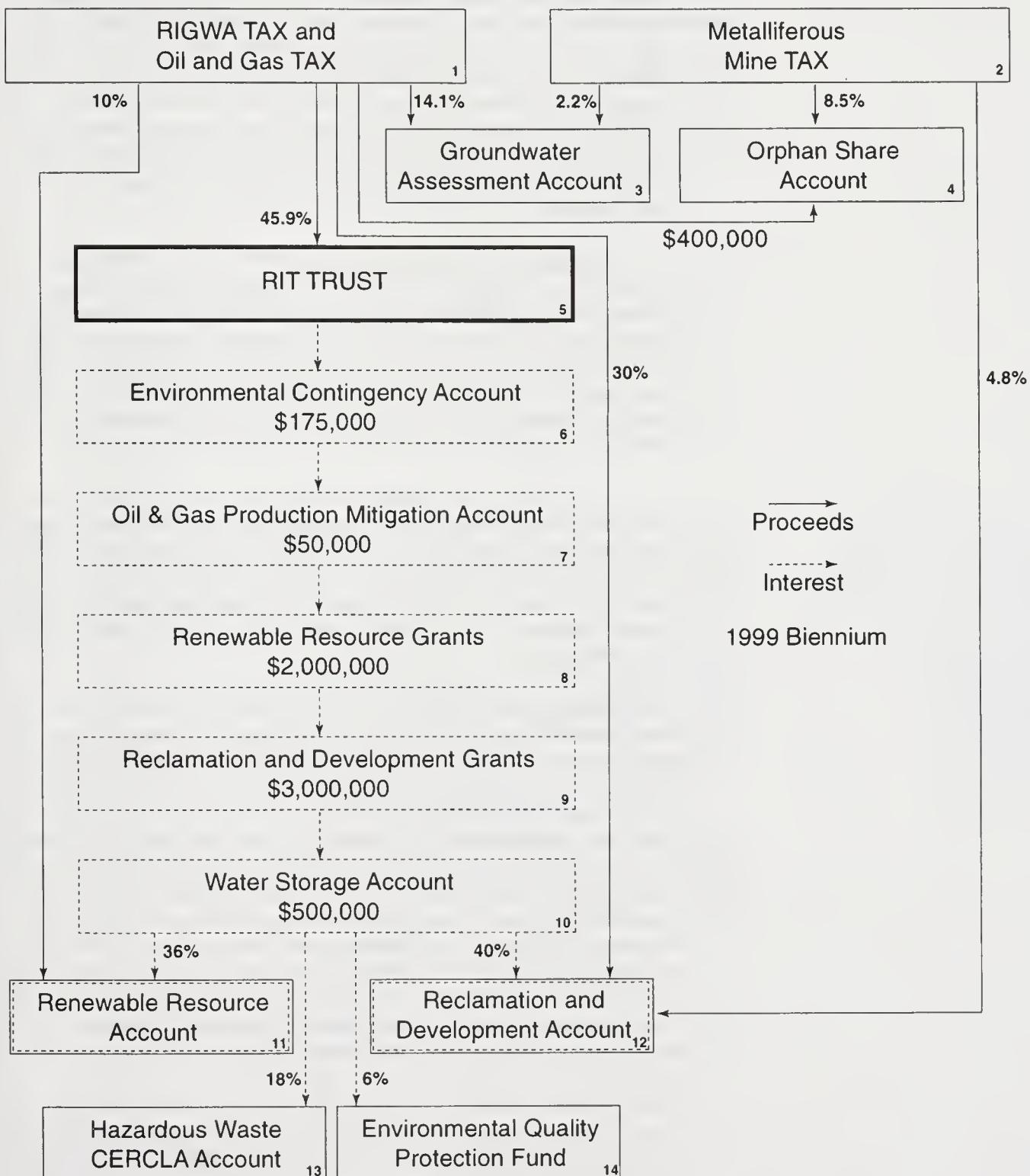
ter commissioners. Monthly training sessions are held for real estate professionals on how to research our water right records, as well as how to complete the water right ownership update and other water right forms.

APPENDIX A

FUNDING INFORMATION CONCERNING THE RESOURCE INDEMNITY TAX AND THE COAL SEVERANCE TAX

Montana Department of Natural Resources
and Conservation
Division of Fish, Wildlife and Parks
Nongame and Endangered Species Program

Allocation of RIT Proceeds and Interest



1. The **Resource Indemnity Groundwater Assessment Tax** (RIGWA) is a 0.5 percent tax of the gross value of the product of all mineral mining. The tax was originally created in 1973. Mineral production, including coal, metals (gold, silver, copper, lead), talc, vermiculite, limestone, and other “nonrenewable merchantable products extracted from the surface or subsurface of the state of Montana” (MCA 15-38-103), is taxed. Senate Bill No. 412 revised the tax structure for oil and natural gas production in Montana by combining a number of different taxes into one tax. This single tax is distributed to local and state agencies. One component was to remove the RIGWA tax on oil and natural gas and instead allocate 10.7 percent of the new combined tax in the same manner that the RIGWA tax is allocated (SB 412, Section 18). This change is intended to be “revenue neutral.”
2. The **Metalliferous Mine Tax** is a tax on “annual gross value of product” of all metal mine production or precious or semiprecious gem or stone production (MCA 15-37-101 et seq.). The tax rate is 1.81 percent of the annual gross value over \$250,000 for concentrate shipped to a smelter, mill, or reduction work (MCA 15-37-103). For gold, silver, or any platinum-group metal that is dore, bullion, or matte and that is shipped to a refinery, the tax rate is 1.6 percent of the annual gross value over \$250,000 (MCA 15-37-103).
3. The **Groundwater Assessment Account** was created in 1991 (MCA 85-2-901 et seq.). The purpose of the account is to fund a statewide groundwater assessment program that will monitor quantity and quality of the state’s groundwater. The program is staffed by the Bureau of Mines and Geology in Butte. An oversight committee reviews all expenditures, approves monitoring sites, prioritizes areas, coordinates information, and evaluates reports.
4. The **Orphan Share Account** was created in 1997 (Senate Bill No. 377 and House Bill No. 584). The purpose of this fund is to provide funding for remediation and reclamation projects where the party responsible for the contamination no longer exists. The Department of Environmental Quality is charged with administering the account. For projects where there are multiple parties, the state will participate in the negotiations to ensure that a fair allocation of the responsibilities for cleanup is made. In these cases a lead party will be responsible for proceeding with cleanup. All parties would participate financially, to the extent that they were responsible for the contamination. The portion of the contamination caused by parties that no longer exist is called the “orphan share,” and these costs may be reimbursed if funds are available within the Orphan Share Account. If sufficient funds are not immediately available, reimbursements will be made over time as funds are deposited into the account.
5. The **Resource Indemnity Tax Trust** (RIT Trust) was created in 1973. No funds that are deposited into the trust can be spent until the total deposits exceed \$100 million. This protection is provided in Article IX, Section 2 of the Montana Constitution. Trust fund proceeds are invested, and the interest earnings are distributed to several natural resource programs.

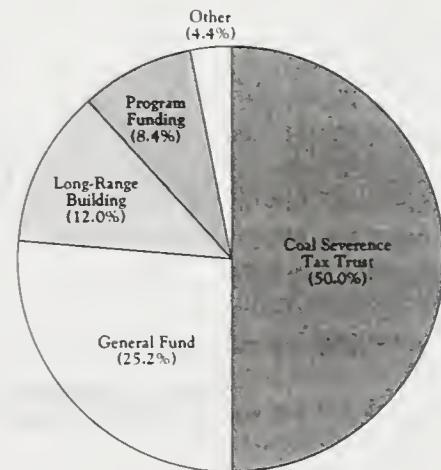
6. The **Environmental Contingency Account** was created in 1985 (MCA 75-1-1101 et seq.). The governor has the authority to approve expenditures from this account to meet unanticipated public needs. Specifically, the statute limits projects to the following objectives: (a) to support renewable resource development projects in communities that face an emergency or imminent need for the services or to prevent the failure of a project; (b) to preserve vegetation, water, soil, fish, wildlife, or other renewable resources from an imminent physical threat or during an emergency, not including natural disasters or fire; (c) to respond to an emergency or imminent threat to persons, property, or the environment caused by mineral development; and (d) to fund the environmental quality protection fund. Each biennium \$175,000 of the RIT trust interest earnings is allocated to this account. The balance in this account cannot exceed \$750,000.
7. The **Oil and Gas Production Damage Mitigation Account** was created in 1989 (MCA 85-2-161). The Board of Oil and Gas Conservation may authorize payment for the cost of properly plugging a well and either reclaiming and/or restoring a drill site or other drilling or producing area damaged by oil and gas operations. The site must be abandoned, and the responsible person either cannot be identified or refuses to correct the problem. Each biennium \$50,000 of the RIT trust interest earnings is allocated to this account. The balance in this account cannot exceed \$200,000.
8. **Renewable Resource Grants** receive \$2 million in RIT trust interest earnings. The renewable resource grant and loan program was created in 1993 by combining the renewable resource development program and the water development program. The purpose of the grant program is to fund projects that conserve, develop, manage, and preserve water and other renewable resources. The program provides preference to projects that support the state water plan. Projects include construction and rehabilitation of existing water supply systems and wastewater systems, educational efforts, feasibility studies, development of water storage, enhancement of renewable resources including recreation, reduction and advancement of agricultural chemical use, and improvement of water use efficiency (MCA 85-1-602).
9. The **Reclamation and Development Grants Program** was established in 1987. The purposes of the program are: (a) to repair, reclaim, and mitigate environmental damage to public resources from nonrenewable resource extraction; and (b) to develop and ensure the quality of public resources for the benefit of all Montanans (MCA 90-2-1101). Projects have included plugging abandoned oil and gas wells, reclaiming mine sites, controlling nonpoint source pollution, researching new technologies for mine waste cleanup, conducting groundwater studies to determine the extent of contamination, and cleaning up pesticide contamination. A minimum of \$3 million of RIT trust interest earnings is allocated for these grants.

10. The **Water Storage Account** was established in 1991 (MCA 85-1-701 et seq.). The purpose of the account is to provide funding for projects that rehabilitate existing water storage facilities or develop new ones. Priority is given to high hazard, unsafe dams. Each biennium \$500,000 of RIT trust interest earnings is deposited into this account. Currently, the only project to receive water storage account funding is the rehabilitation of the state-owned dam on the Tongue River in eastern Montana.
11. The **Renewable Resource Grant and Loan Program** state special revenue account receives 36 percent of the remaining interest earnings from the RIT trust and 10 percent of the RIGWA tax proceeds. This special revenue account also receives revenue from state water projects, excess deposits in the renewable resource debt service account, and other administrative fees. The revenues are used to fund natural resource agency projects and administration, including the Department of Natural Resources and Conservation, Governor's Office, Water Court, and State Library.
12. The **Reclamation and Development Grants Program** state special revenue account receives 40 percent of the remaining RIT trust interest earnings, 30 percent of the RIGWA tax proceeds, and 4.8 percent of the Metalliferous Mine Tax. The revenues are used to fund projects and administration of natural resource agencies, including the Department of Natural Resources and Conservation, State Library, Reserved Water Rights Compact Commission, Department of Environmental Quality, and Environmental Quality Council.
13. The **Hazardous Waste CERCLA Account** is administered by the Department of Environmental Quality. CERCLA stands for the federal Comprehensive Environmental Response, Compensation, and Liability Act. This account receives 18 percent of the remaining RIT trust interest earnings. The account was established in 1983 and is to be used to make payments on CERCLA bonds, implement the Montana Hazardous Waste Act, and provide assistance in remedial action under CERCLA.
14. The **Environmental Quality Protection Fund** was established in 1985 and is administered by the Department of Environmental Quality. This account receives 6 percent of the remaining RIT trust interest earnings. The purpose of this account is to provide funding for remedial actions taken by the department in response to a release of hazardous or deleterious substances.

COAL SEVERANCE TAX TRUST

Within 30 days of the end of each calendar quarter, coal severance taxes are paid to the state, 50 percent of which are deposited in the Coal Severance Tax Trust Fund (the Trust) by the Department of Revenue. Five accounts are established within the Trust: (1) the Coal Severance Tax Bond Fund, (2) the School Bond Contingency Loan Fund, (3) the Treasure State Endowment Fund, (4) the Coal Severance Tax Permanent Fund, and (5) the Coal Severance Tax Income Fund.

1. Coal tax revenues that flow into the trust are initially deposited in the **Coal Severance Tax Bond Fund** (Bond Fund) and made available for payment of debt service on Coal Severance Tax Bonds (see footnotes 7, 8, and 9). The Department of Natural Resources and Conservation (DNRC) informs the Department of Revenue, during the first quarter of each state fiscal year, of the amount necessary to meet all principal and interest payments on bonds payable from the Bond Fund for the next year (two semi-annual payments). The Department of Revenue retains that amount in the Bond Fund.
2. The January 1992 Special Legislative Session passed an act creating the **Coal Severance Tax School Bond Contingency Loan Fund** (Contingency Loan Fund). A total of \$25 million of school bonds was authorized to be issued and secured by this fund. For as long as there are any outstanding school district bonds secured by the Contingency Loan Fund, an amount equal to the next 12 months of principal and interest payments due on any school bonds is retained in the Contingency Loan Fund. DNRC provides written notice to the Department of Revenue in January of each year of the amount needed to secure school district bonds.
3. The **Treasure State Endowment Fund** (Endowment Fund) was established when voters approved the ballot measure on June 2, 1992. During the first quarter of each state fiscal year, 50 percent of the amount in excess of what is retained in the Bond Fund and in the Contingency Loan Fund is deposited in the Endowment Fund. The Department of Commerce notifies the Department of Revenue when interest earnings are needed to fund local infrastructure projects. The Department of Revenue then transfers the interest earnings from the Endowment Fund to the **Treasure State Endowment Special Revenue Account** (Revenue Account). The Department of Commerce then approves the disbursement of funds to authorized local governments. Interest earnings not transferred to the Revenue Account for projects are retained in the Endowment Fund.
4. During the first month of each quarter of the state fiscal year, 50 percent of the amount in excess of what is retained in the Bond Fund and in the Contingency Loan Fund

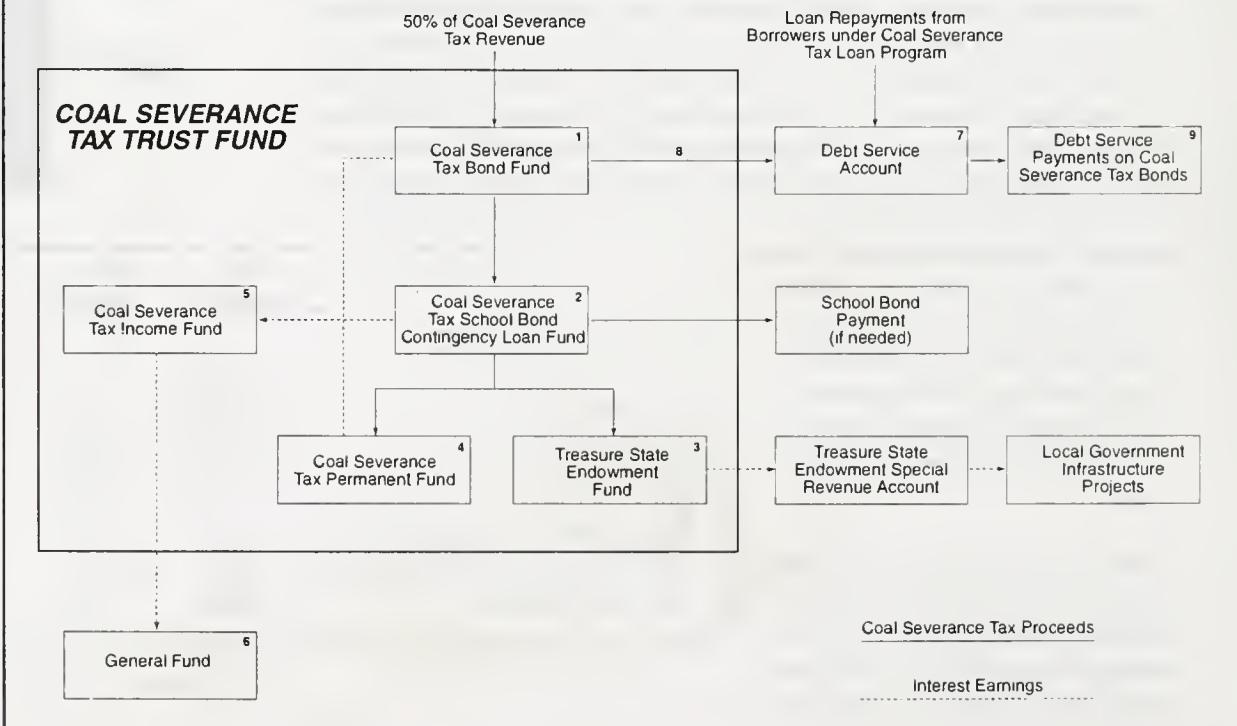


	Tax Allocation	FY 98 (\$1,000)	FY 99 (\$1,000)
Coal Severance Tax Collections (Revenue Oversight Committee Revenue Est.)		38,831	38,223
Coal Severance Tax Trust Fund	50.00%	19,416	19,112
General Fund	25.25%	9,805	9,651
Long-Range Building Program	12.00%	4,660	4,587
Program Funding	8.36%	3,246	3,195
Other			
Parks Acquisition and Management Trust	1.27%	493	485
Renewable Resource Loan Debt Service	0.95%	369	363
Cultural and Aesthetic Trust and Capitol Art	0.87%	338	333
Virginia and Nevada Cities	1.30%	505	497

is transferred to the Coal Severance Tax Permanent Fund (Permanent Fund). State law authorizes the Board of Investments to invest up to 25 percent of the Permanent Fund in the Montana economy.

5. Investment income on the deposits in the Bond Fund, the Contingency Loan Fund, and the Permanent Fund are periodically transferred to the Coal Severance Tax Income Fund. The only exception to this is the Endowment Fund, where any interest earnings are either transferred to the Revenue Account or retained in the Endowment Fund.
6. The entire balance in the Income Fund is transferred to the General Fund on a monthly basis.
7. Under the Coal Severance Tax Loan Program, the state sells coal severance tax bonds and loans the proceeds to local governments for various infrastructure projects. The borrowers make semiannual or annual loan payments, which upon receipt are credited to a Debt Service Account. The terms of the loans vary, but generally involve an interest rate subsidy for the first five years of the loan followed by a direct pass-through of the interest rate on the state bonds for the remaining life of the loan. The loan program and debt service accounts are administered by DNRC.
8. Debt service payments on the bonds are due each June 1 and December 1. To the extent that funds on hand in the Debt Service Account are insufficient to pay principal and interest on the bonds when due, funds are transferred to the Debt Service Account from the Bond Fund.

Coal Severance Tax Trust Fund Flow of Funds Summary



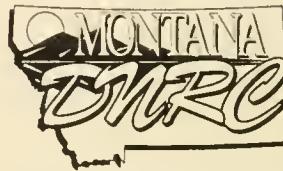
On January 1 of each year, funds are transferred to the Debt Service Account from the Bond Fund to the extent necessary to cause the balance in the Debt Service Account to equal one-twelfth of the next two ensuing semiannual debt service payments. DNRC provides written notice to the Department of Revenue if funds are needed to pay debt service or to make the required transfer on January 1. On January 1 of each year, DNRC also sweeps the Debt Service Account of funds in excess of one-twelfth of the next two ensuing semiannual debt service payments. The excess is returned to the Bond Fund in repayment of borrowed money, if necessary, or deposited in the Renewable Resource Grant and Loan Program Special Revenue Account.

9. On each June 1 and December 1, the state pays debt service on the bonds from amounts on hand in the Debt Service Account. Payments are made by DNRC.

ABBREVIATIONS

AFY	acre-feet per year
AUM	animal unit month
BIA	Bureau of Indian Affairs, U. S. Department of the Interior
BLM	Bureau of Land Management, U. S. Department of the Interior
BMP	best management practice
BOGC	Board of Oil and Gas Conservation
CARDD	Conservation and Resource Development Division
CD	conservation district
CDB	Conservation Districts Bureau
cfs	cubic feet per second
CRM	coordinated resource management
CRP	Conservation Reserve Program
CSD	Centralized Services Division
DEQ	Montana Department of Environmental Quality
DFWP	Montana Department of Fish, Wildlife and Parks
DNRC	Montana Department of Natural Resources and Conservation
EIS	environmental impact statement
EPA	U. S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FWS	Fish and Wildlife Service, U. S. Department of the Interior
FY	fiscal year
GIS	geographic information system
HRA	Hazard Reduction Agreement
KYW	know your watershed
MACD	Montana Association of Conservation Districts
MBMG	Montana Bureau of Mines and Geology
MBPY	million barrels per year
MCA	Montana Code Annotated
MCF	thousand cubic feet
MEPA	Montana Environmental Policy Act
MMBPY	million barrels per year
MPC	Montana Power Company
MSCA	Montana Salinity Control Association
MtPrime	Montana Project to Reengineer the Revenue and Information Management Environment
NACD	National Association of Conservation Districts
NPS	nonpoint source
NRCS	Natural Resources Conservation Service, U. S. Department of Agriculture
RCAC	Resource Conservation Advisory Council
RC&D	resource conservation and development
RDB	Resource Development Bureau
RDGP	Reclamation and Development Grants Program
RIT	resource indemnity tax
RRGLP	Renewable Resource Grant and Loan Program
RWRCC	Reserved Water Rights Compact Commission
SFLMP	State Forest Land Management Plan
SMZ	streamside management zone
SRF	State Wastewater Revolving Fund
SUPJV	Seven-Up Pete Joint Venture
TMDL	total maximum daily load
UIC	underground injection control
USBR	Bureau of Reclamation, U.S. Department of the Interior
USDA	U. S. Department of Agriculture
USFS	Forest Service, U. S. Department of Agriculture
USGS	Geological Survey, U. S. Department of the Interior
WMB	Water Management Bureau
WRD	Water Resources Division

“To help ensure Montana’s land and water resources provide benefits for present and future generations”



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